TECHNOLOGY DEPT

NEW EQUIPMENT DIGEST

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April, 1953
Volume 18—Number 4

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Use Inquiry Slips—Pages 16 and 112

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

ALL-PURPOSE FLOOR MACHINE
for institution and industrial use

Latest addition to line is 22-in. model MC-22 all-purpose floor machine which is especially useful in the larger institutions and industrial plants. It is powered by 1½-hp G-E motor and can serve floor areas of 20,000 sq ft and more. This machine is one in foreground of illustration which shows models as small as 12-in. machine for 750 to 2000-sq ft floor areas. Made by **Multi-Clean Products, Inc.**, 2275-79 Ford Pkwy., St. Paul 1, Minn.

▲ For more details circle **NED-1 D3** on enclosed inquiry slip ▲

PIPE LINE FILTERS
small units for air or gas

One-bolt accessibility for quick inspection and cleaning without removing from the line is a feature of four small pipe line filters. They are designed for installations requiring only 40 psi maximum pressures for compressed air or gas. Two sizes can use either absorption pad media for removal of oil and water vapor or radial fin inserts for removal of dirt and scale. Smaller size filter is 3½ in. diameter and 6½ in. long, while larger size has same diameter and a 10-in. length with more filtration surface. Made by **Dollinger Corp.**, 49 Centre Pk., Rochester 3, N. Y.

▲ For more details circle **NED-2 D3** on enclosed inquiry slip ▲

PRESSURE CONTROLS
settings adjustable within ranges from 0-30 to 300-2500 psi

Type DA-400 pressure controls, available in ranges from 0-30 to 300-2500 psi, incorporate a single bourdon tube which actuates two individually adjustable magnet-operated mercury switches. A calibrated dial with two outside adjustments is provided for setting the pressures at which each switch operates. Use can be to close one alarm circuit at high pressure and another at low pressure with both circuits open over the operating range. It can act as an electrical interlock to open one circuit as pressure rises above the second circuit or as pressure drops below operating range. It will also provide two-stage control by opening or closing one circuit on a pressure rise and the second circuit on a further rise. Each switch is rated at 20 w 115 or 230 v ac-dc, 9/10-amp at 24 v or less. Made by **Mercoid Corp.**, 4223 W. Belmont Ave., Chicago 41, Ill.

▲ For more details circle **NED-3 D3** on enclosed inquiry slip ▲

HYDRAULIC PUMP UNIT
has built-in selector valve

Selector valve built into this hand-operated hydraulic pump unit enables the operator to apply or reverse the flow at will. Valve will operate at any degree of pressure from 0 to 10,000 psi, making it applicable for use with double-acting remote control rams and cylinders. Unit has a 4-gal reservoir and two hand-operated pumps of ½ and 1-in. size, plus two outlets. Selector valve determines the outlet through which pressure is to be applied. Made by **Wm. S. Pine**, 1637-A E. 22nd St., Los Angeles 11, Calif.

▲ For more details circle **NED-4 D3** on enclosed inquiry slip ▲

POWER TRUCK SAFETY POSTERS
promote safe operating practices

Composed of series of eight graphic safety posters, these reminders for industrial truck operators on safe driving and operating practices are printed in color on 14 x 22-in. sheets for bulletin board and in-plant use. Bold cartoon style makes them easy to read at a distance or from moving truck. The tag-line "Be Smart—Be Safe" appears on each poster. Common hazards and practices in industrial truck operation are treated. Complete set of posters is available free from **Baker-Raulang Co.**, Baker Industrial Truck Div., 1245 W. 80th St., Cleveland 2, O.

▲ For more details circle **NED-5 D3** on enclosed inquiry slip ▲

Better Service Through Growth

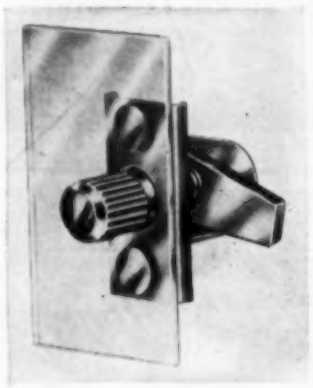
Keeping our ever-increasing number of readers fully informed of all that's new in the field of industrial equipment, materials, processes and literature has always been the purpose of the editors and the publisher of NEW EQUIPMENT DIGEST. To provide the most complete service possible to you men who are responsible for engineering, production, maintenance and purchasing throughout industry, we are enlarging our publication to accommodate the increased volume of worthwhile developments that is being offered today.

This April issue is the largest we have ever published. It contains over 100 more new product announcements than any previous issue. More advertisers are presenting their wares than ever before.

Times are booming, and manufacturers are releasing more new or improved equipment than at any time in the history of this country. We want you to know about these products that will make your job easier, effect savings in manpower and materials, improve working conditions and plant safety, and enable you to produce more. Hence, NEW EQUIPMENT DIGEST will, as always, present all that's new in the industrial equipment field in our usual concise, time-saving and readable manner. It is a pleasure to serve you.

A. N. Gregg
EDITOR

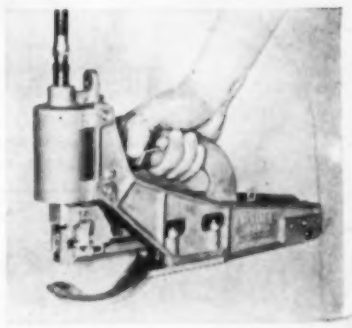
ADJUSTABLE FASTENER
for door frames of varying thickness



Adjustable to door frames varying in thickness from 0 to 25/32-in., this miniature adjustable pawl fastener is installed by slipping its knurled activating knob through a hole in the door and attaching with two rivets or spot welds. It weighs ½-oz and fits in a ¾-in. long housing. Turning the brightly plated knob sets the pawl at the proper contact distance for locking against door frames of different thicknesses. Spring tension holds the pawl at the selected position. Made by **South Chester Corp.**, Southco Div., 1413 Finance Bldg., Philadelphia 2, Pa.

▲ For more details circle **NED-6 D3** on enclosed inquiry slip ▲

AIR-DRIVEN STAPLER
for heavy duty carton closing



Model CAD air-driven stapling machine, designed for heavy duty carton closing jobs, can be carried to the work. Thus it is adapted for closing large, odd-shaped containers that are difficult to move. Machine operates on 80 to 90 psi air pressure and can staple solid fiber or corrugated board with ease. One staple is driven with each squeeze of the trigger, at rates up to 120 per minute. Made by **Bostitch**, 1008 Mechanic St., Westerly, R. I.

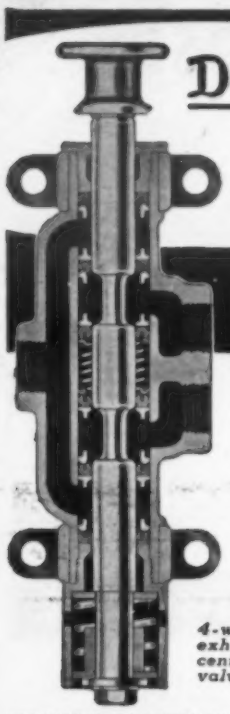
▲ For more details circle **NED-7 D3** on enclosed inquiry slip ▲

HYDRAULIC FLOW CONTROL
of pressure compensating type operates at 3000-psi pressure

Pressure compensating type multirange flow control valve, designed for metering or controlling the oil flow in a hydraulic system, maintains oil flow at a uniform rate regardless of circuit pressure variation. It is made for operating pressures up to 3000 psi and is offered in two and three-port types in ¼, ⅜ and ¾-in. sizes for subplate mounting, with or without built-in checks.

Two-way adjustable orifice provides 100 per cent regulation of flow within a given range and an optional choice of ranges to accommodate low or high volume systems. Range is changed by rotating the single cartridge type spool in increments of 180 degrees until the desired maximum range of flow is reached. The multirange flow control can be used in meter-in, bleed-off or other standard circuits used in a work cycle. Made by **Denison Engineering Co.**, 1152 Dublin Rd., Columbus 16, O.

▲ For more details circle **NED-8 D3** on enclosed inquiry slip ▲



Diversatility

IN CONTROL OF DOUBLE-ACTING AIR CYLINDERS

Only VALVAIR offers 2 Kinds of Neutral Valves

Manual or spring-return to neutral position are the two models by Valvair. Three types: (1) all ports blocked at neutral; (2) inlet and cylinder ports open to pressure, exhaust closed; (3) inlet closed, cylinder ports open to exhaust. 3-way and 4-way. Pipe sizes, 1/4" through 1". Six control assemblies: knob, lever, clevis, treadle, cylinder, solenoid.

4-way, piped exhaust, spring-centered neutral valve.

★ ★ ★

Get Bulletin "KN-4"

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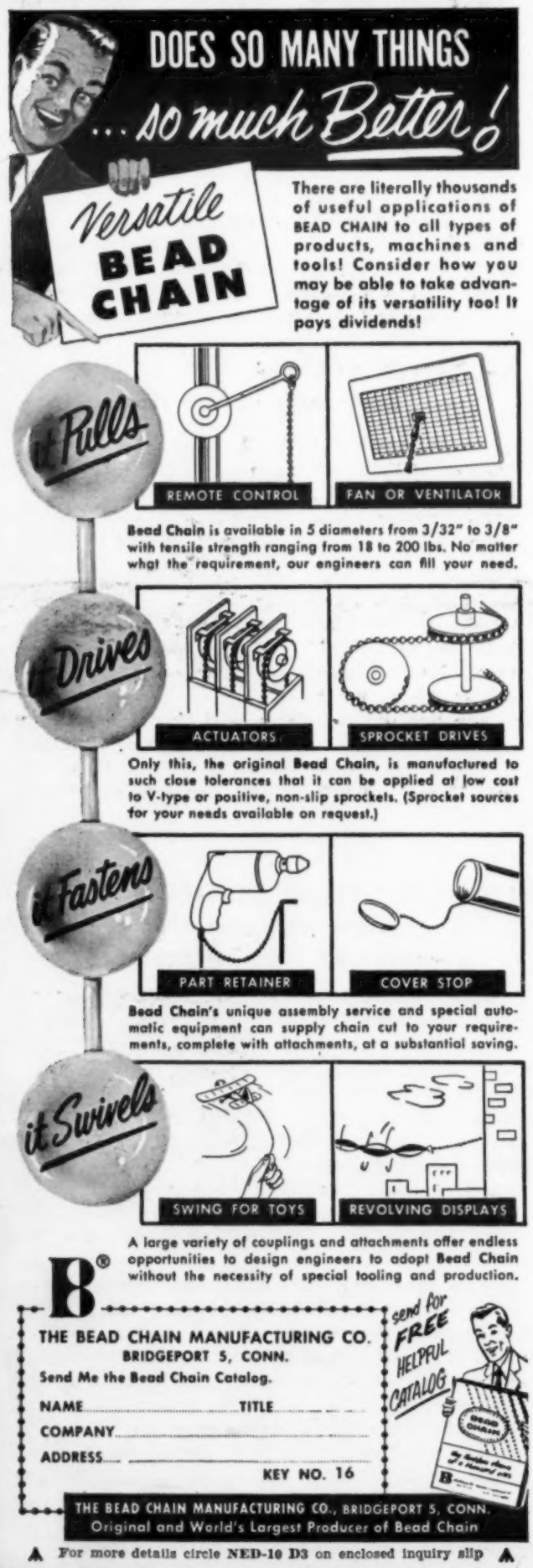
REPRESENTATIVES IN PRINCIPAL CITIES

Rely Upon Valvair — 2-WAY — 3-WAY — 4-WAY

▲ For more details circle **NED-9 D3** on enclosed inquiry slip ▲



There are literally thousands of useful applications of BEAD CHAIN to all types of products, machines and tools! Consider how you may be able to take advantage of its versatility too! It pays dividends!

Bead Chain is available in 5 diameters from 3/32" to 3/8" with tensile strength ranging from 18 to 200 lbs. No matter what the requirement, our engineers can fill your need.

Only this, the original Bead Chain, is manufactured to such close tolerances that it can be applied at low cost to V-type or positive, non-slip sprockets. (Sprocket sources for your needs available on request.)

Bead Chain's unique assembly service and special automatic equipment can supply chain cut to your requirements, complete with attachments, at a substantial saving.

A large variety of couplings and attachments offer endless opportunities to design engineers to adopt Bead Chain without the necessity of special tooling and production.

THE BEAD CHAIN MANUFACTURING CO.
BRIDGEPORT 5, CONN.
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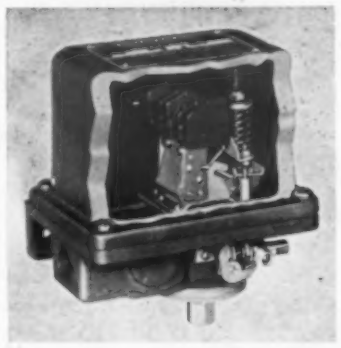
THE BEAD CHAIN MANUFACTURING CO., BRIDGEPORT 5, CONN.
Original and World's Largest Producer of Bead Chain

▲ For more details circle **NED-10 D3** on enclosed inquiry slip ▲

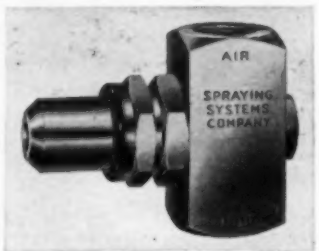
PRESSURE SWITCH in explosion resisting enclosure



Adaptable to control of water pumps, air compressors and similar equipment in hazardous atmospheres, this pressure switch is housed in an explosion resisting enclosure. Two switch types are available. Water control has pressure range of 20 to 80 psi, while air compressor switch handles 40 to 200-psi range. Latter is available with two-way release valves. Both units are adjustable over their entire pressure ranges. Enclosure is designed to meet Class I, Group D specifications. Made by **Square D Co.**, 4045 N. Richards St., Milwaukee 12, Wis.

▲ For more details circle **NED-11 D3** on enclosed inquiry slip ▲

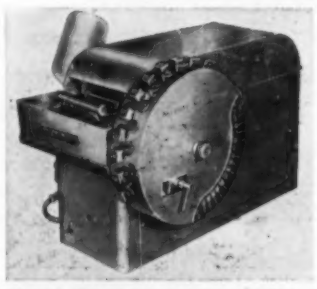
PNEUMATIC ATOMIZING NOZZLE capacities range from 4 to 20 gpm



Of extremely large capacity type, series 1-J pneumatic atomizing nozzles operate at pressures from 6 to 90 psi. They provide deliveries in range of 4 to 20 gpm and are supplied with or without shut-off needles. Made by **Spraying Systems Co.**, 3211 Randolph St., Bellwood, Ill.

▲ For more details circle **NED-12 D3** on enclosed inquiry slip ▲

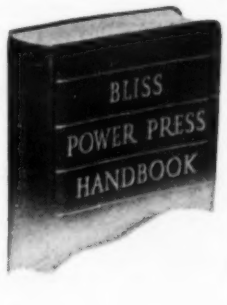
TAPE DISPENSING MACHINE is electric, pushbutton type



Any tape length from 3 to 100 in. is delivered at the touch of a button with this Clip-A-Tape electric pushbutton tape dispensing machine. Constant, steady motor driven tape speed assures even spread of moisture. Separate, thermostatically controlled heating unit keeps water warmed to most effective sealing temperature. Tape widths from 1 to 4 in. wide can be used, and self-sharpening blades require no special adjustments for cutting string-filled, reinforced tapes. Machine measures 12 x 12 x 20 in. and has baked enamel finish. Parts subject to corrosion are stainless steel. Made by **Ideal Stencil Machine Co.**, Dept. NED, 134 Iowa Ave., Belleville, Ill.

▲ For more details circle **NED-13 D3** on enclosed inquiry slip ▲

Bought your copy yet?



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Sections on: Computing press jobs • Selecting proper press • Useful engineering tables • Die illustrations • Complete glossary • Plus a service section for Bliss presses. **$7.50**

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Rush me a copy of the Bliss Power Press Handbook.

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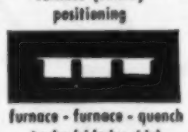
Here's how you can cut costs on heat-treating small tools!

furnace - quench tanks - furnace (corner) positioning



furnace - furnace - quench tanks (side-by-side) positioning

furnace - quench tanks - furnace (side-by-side) positioning

The compactness, plus versatility of this Waltz small tool furnace enables you to have heat treating facilities right in your own shop.

This Waltz set-up includes a pre-heat furnace, a high heat furnace and quench tanks in a unit designed for convenient positioning in your shop. Furnace sections equipped with casters. Temperature range permits treatment of all high speed steels including cobalt.

Waltz small tool furnaces are "money makers" in hundreds of shops throughout the country. Why not enjoy the lucrative advantages of heat treating facilities right in your own shop?

A complete line of Waltz standard or special heat treating furnaces, using all types of fuels, are built to suit your requirements. Write Dept. B for comprehensive bulletin.

Waltz FURNACE COMPANY
Symmes Street, Cincinnati, Ohio

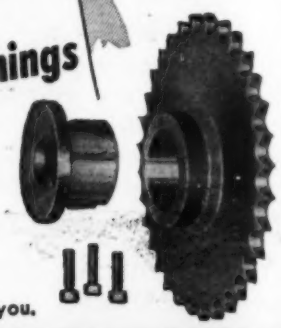
▲ For more details circle **NED-15 D3** on enclosed inquiry slip ▲

Browning SPROCKETS

OFF-THE-SHELF READY-FOR-USE

A Time and Money Saver with

Split Taper Compression Bushings
- NO REBORING
- NO WELDING



Write for Catalog CD 101.

There's a Browning Distributor near you.

BROWNING MANUFACTURING COMPANY MAYSVILLE • • • KENTUCKY

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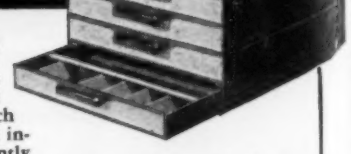
SPEED HANDLING OF TINY PARTS WITH NEW LITTLE GEM* CABINETS

Ideal for storage of nuts, bolts, screws, washers, bushings, packings, adaptors, springs, stems, small gears, etc.



The Little Gem is a ruggedly-built, all steel two drawer storage unit that measures 11" x 11" x 3¼". Each drawer may be divided into as many as 28 instantly adjustable compartments through use of flush-fitting dividers. Sides and bottom are fully enclosed to prevent escape of even the tiniest parts. Front of compartment is curved for easy removal of parts . . . rear has ¾" overhang to prevent mixing of items when drawer is jerked open or slammed shut. Easily visible label holders on every compartment permit quick identification of all parts.

The Little Gems may be used individually, in stacks, under counters, or on shelving. See them at your Equipto distributor or write us for free catalog.

*Trade Mark, Patent Pending

Equipto Division of Aurora Equipment Company 690 Prairie Avenue, Aurora, Illinois
Steel Shelving . . . Parts Bins . . . Drawer Units

▲ For more details circle **NED-17 D3** on enclosed inquiry slip ▲

YOU WON'T BELIEVE YOUR EYES

This afternoon, go out into the plant and look at the method used on your own production line for removing insulation from wire.

Compare its efficiency with that of practically any other operation in the plant.

Chances are you'll say, "This can't be possible!" Then you may ask, "How can I improve this wire stripping operation?"

We do not pretend to know all the answers but we do . . .

Specialize in Developing Wire Stripping Methods

Rush Wire Stripper Division
The Eraser Co., Inc.
120 S. State St., Syracuse 2, N. Y.

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(confidential, obsolete records, waste, newsprint, rolls, sheets, small pieces)

Out come unreadable shreds . . . VALUABLE packing material . . . without noise, dust or litter.

SHREDMASTER shredding machines . . .
- pay for themselves quickly
- are completely safe
- can be operated by anyone
- require negligible maintenance

Desk Model (shown above)
- Designed for office environment
- 9-inch cutting width
- ¼-inch shreds

Table Model (all-purpose machine)
- 14-inch cutting width
- ⅛-inch shreds, or multiples thereof

Heavy Duty Floor Model (production machine)
- 21-inch cutting width
- ⅛-inch shreds, or multiples thereof

For Complete Information Ask for Circular #4

THE SHREDMASTER CORPORATION
Division of Self-Winding Clock Company
197 Willoughby Avenue, Brooklyn 5, N. Y.

▲ For more details circle NED-19 D3 on enclosed inquiry slip ▲

TESTED-PROVEN-ACCEPTED

FOR OVER 100 YEARS!

Stock Patterns:

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SAW MAKERS
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Grey Iron and Semi-steel Castings

EAGLE ANVILS since 1843

All anvils meet government specifications for quality tools.

Power tool and die press anvils are available on quotation. Send us your requirements.

Stock anvils come in 17 sizes, in weights from 50 to 700 pounds. Write for price list.

SPECIAL ANVILS ANY WEIGHT OR SIZE UP TO 700 POUNDS

FISHER & NORRIS
"EAGLE" ANVIL WORKS
41 Bloomsbury Street, Trenton, N.J.

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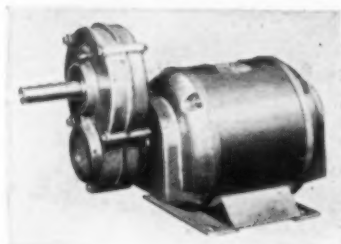
RECORD STORAGE FILES
improved for "dead" storage

Smooth front is major improvement incorporated in line of record storage files. Made of Chem-Board heavy duty corrugated board which is chemically impregnated to rock-hard strength, they now have attractive smooth-face exterior. Files are available in standard sizes for filing correspondence and usual office forms. Made by **Convoy, Inc.**, 3224 Navarre Rd. S. W., Canton 6, O.

▲ For more details circle NED-21 D3 on enclosed inquiry slip ▲

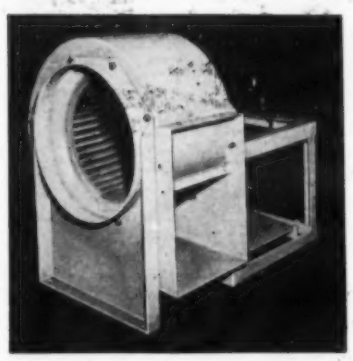
SPEED REDUCER
reduction ratio is 3.04 to 1



Conversion of electric motors into geared motor type reducers is possible with this model 3R3 Uni-Reducer. Reducer slips onto the motor shaft and is designed to fit standard motors from 1 to 5 hp which operate at 1800 rpm, most 1 to 3-hp units operating at 1200 rpm and some 900 rpm motors. It can be furnished with a Turner high torque motor. With reduction ratio of 3.04 to 1, reducer is provided with torque arm takeup which eliminates necessity for slide-rails. It can be run clockwise or counter-clockwise. Made by **Turner Uni-Drive Co.**, 3400 Terrace St., Kansas City 8, Mo.

▲ For more details circle NED-22 D3 on enclosed inquiry slip ▲

BLOWER-EXHAUSTER
can be fastened to wall



Ventilating, smoke, heat and fume removal problems can be solved by this compact blower-exhauster. It requires no cabinet or superstructure and can be fastened directly to the wall. Angle of discharge can be adjusted at any degree. Motor, bearings and other parts are designed for quiet operation. Made by **Brundage Co.**, 558 N. Park St., Kalamazoo 11, Mich.

▲ For more details circle NED-23 D3 on enclosed inquiry slip ▲

This ball bearing screw jack is only 7 inches high—can lift 15 tons 2½ inches. It weighs 22 lbs.

Designed especially for those hard-to-get-at-spots too small for a big, heavy jack—the Duff-Norton "Shorty" has made friends in shops, mills, shipyards, and on construction jobs.

For complete specifications on the "Shorty" and other dependable Duff-Norton Journal Jacks, write the world's oldest and largest manufacturer of lifting jacks for Bulletin AD12 N, The Duff-Norton Manufacturing Company, P.O. Box 1889, Pittsburgh 30, Pa. Canadian plant—Toronto 6, Ontario.

DUFF-NORTON Jacks

"GIVING INDUSTRY A LIFT SINCE 1883"

▲ For more details circle NED-24 D3 on enclosed inquiry slip ▲

Stronger Joints—Faster!

Instant resistance heating concentrates heat for better solder adhesion in fast production work. Saves up to 30% time per joint. No pre-heating, no set-up . . . no cold-flow joints *and no re-makes*. Can't melt nearby joints or burn parts. Many capacities, "Pliers," "Fork" or "Pencil" attachments.

Sold Through Leading Distributors

IDEAL Thermo-Grip® TEST IT FREE

IDEAL INDUSTRIES, Inc. 1032 Park Avenue, Sycamore, Illinois
Please arrange FREE Thermo-Grip Demonstration and send catalog data
Name ____ Company ____ Address ____ City ____ Zone ____ State ____

▲ For more details circle NED-25 D3 on enclosed inquiry slip ▲

FOSTER
Chrome Sleeve Quick Detachable
COUPLERS
AND HOSE FITTINGS

Price...Lower than most
Quality...None Better
Delivery...Immediate

- Reusable Socket Heads for Lower Replacement Cost!
- One Second Hookup Under Pressure!
- Tight-Seal, Dirt-Proof Construction! Leak-proof!
- Instant Automatic Flow! Swivel Action!

Foster Quick Detachable Couplers for pneumatic and hydraulic applications give longer service and cost less than other comparable couplers. Delivery of any order, large or small, is immediate. An order to Foster is faster. Write Dept. 2.

FOSTER MFG. COMPANY, INC.
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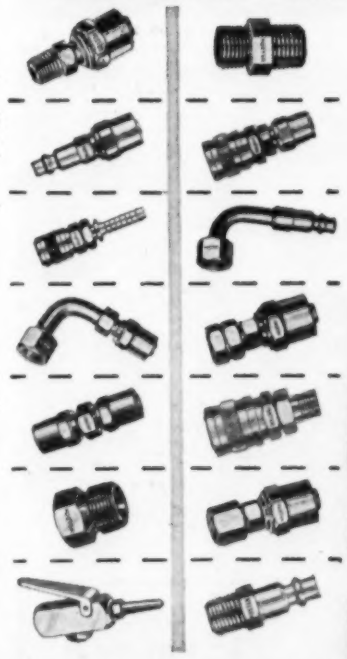
FOSTER FITTINGS ARE AVAILABLE THROUGHOUT THE NATION



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when you use
EthoLoc* CABLE CLIPS

Made of TOUGH, DURABLE ETHYL CELLULOSE PLASTIC—FLEXIBLE, EASY TO INSTALL

Write for Sample and Full Information, including Strength Tests and Prices

ALSO MFRS. OF ALL NYLON CABLE CLIPS

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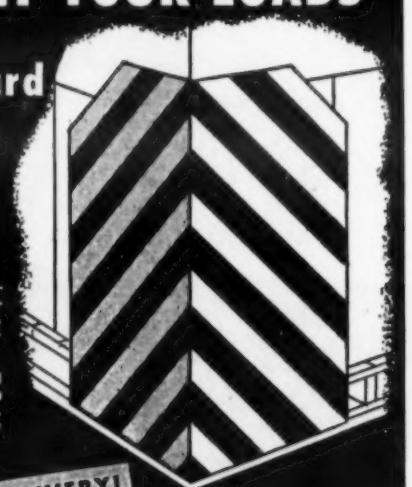
PROTECT YOUR LOADS WITH RAN-guard ALL-STEEL CORNER PALLET GUARD



- Heavy steel construction; welded gusset slips under load, adds maximum protection.
- Adaptable to all types of loads; on skids, pallets, floor. A MUST for every plant!

IMMEDIATE DELIVERY!
Order a RAN-guard for every load TODAY!
Model #812—12x12x24" . . $3.50
Packed 6 per carton
Model #815—15x15x30" . . $4.95
Packed 4 per carton
Dealers: Write for information & prices

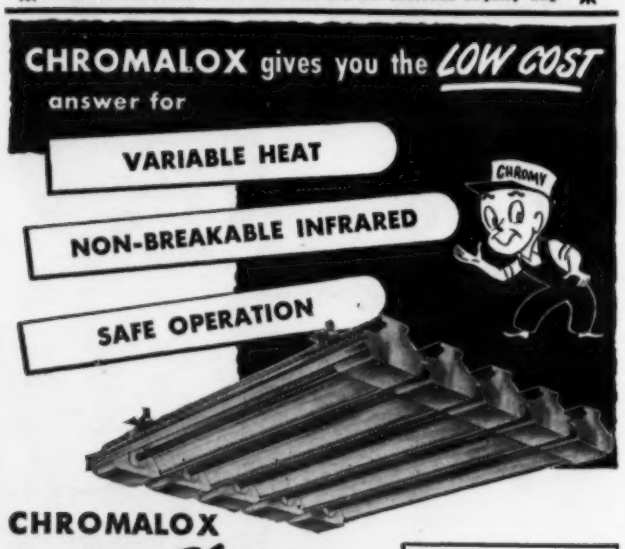
Attractive Black and Yellow Stripes conform to Natl. Safety Standards.

Randolph 3843 W. 43rd St. Chicago 32, Ill.
METAL PRODUCTS COMPANY
A DIVISION OF MARVEL METAL PRODUCTS CO.

▲ For more details circle NED-28 D3 on enclosed inquiry slip ▲

CHROMALOX gives you the LOW COST answer for

VARIABLE HEAT
NON-BREAKABLE INFRARED
SAFE OPERATION



CHROMALOX
ALL-METAL *Electric* RADIANT HEATERS

The new and improved CHROMALOX heating principle gives ALL infrared heat advantages: high heat intensity, "color blind" infrared radiation, heat that's infinitely variable! You get more satisfactory results at reduced costs in baking, drying, curing, preheating and similar uses with CHROMALOX Radiant Heaters.

Write for FULL DATA
Tell us what you want to do with infrared heat and we'll send you data sheets covering your needs.
18-23

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other ad. on pg. 85

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

▲ For more details circle NED-29 D3 on enclosed inquiry slip ▲

PHOTO COPY MACHINE
one unit exposes and processes

Exact-Photo-Copy is a fully automatic dry photo copy machine that exposes and processes, without need for auxiliary equipment or darkroom. Anything typed, written, printed or drawn can be reproduced. After plugging machine into an electric outlet, material to be copied is inserted into the exposure section with a sheet of No. 1 paper. After an 8-second exposure, both sheets are removed and the No. 1 paper is inserted into the processing section with a sheet of transfer paper for a 15-second processing period. Peeling apart the two sheets completes the process. Paper 12 in. wide by any length can be accommodated. Made by **General Photo Products Co.,** Dept. NED, General Photo Bldg., Chatham, N. J.

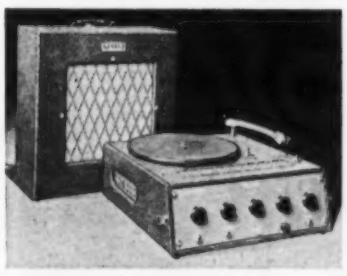
▲ For more details circle NED-30 D3 on enclosed inquiry slip ▲

MANUAL CRANE
design minimizes friction, binding

Ease of handling and free rolling with a minimum of friction and binding are given the Flexo-Crane by swiveling type end trucks and unit's light weight. Manual crane's bridge girder is mounted on a pair of short wheelbase trucks that retain alignment with track and swivel to adjust themselves to runway irregularities. Large diameter wheels are made of cast iron with ball bearings. Made by **Abell-Howe Co.,** 53 W. Jackson Blvd., Chicago 4, Ill.

▲ For more details circle NED-31 D3 on enclosed inquiry slip ▲

TRANSCRIPTION UNIT
of high fidelity type



Seven-tube amplifier with push-pull beam power output tubes and a 16-in. tone arm give the model 2195 10-w transcription unit high fidelity results on all records from 6 to 16 in., at speeds from 30 to 80 rpm. Unit includes microphone and microphone-or-instrument inputs and built-in phonagraph equipment, each with separate volume controls for intermixing. A 12-in. heavy duty speaker, mounted in the removable lid, has a 25-ft cable. Made by **Bell Sound Systems, Inc.,** 550-55 Marion Rd., Columbus 7, O.

▲ For more details circle NED-32 D3 on enclosed inquiry slip ▲

you can

Capacity—40 packages (18" long) per minute

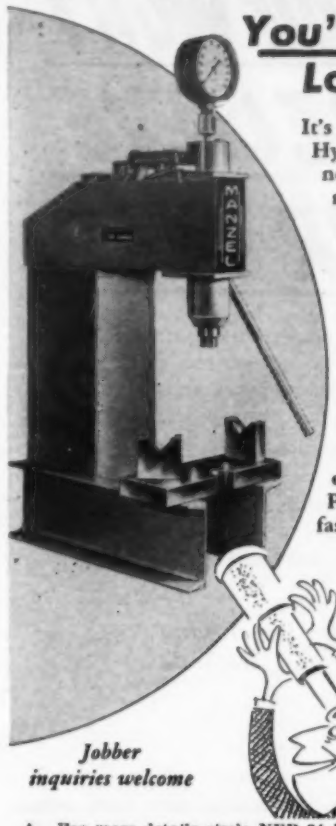
COUNT *on this!*

The Logan Package Counter is a positive, mechanical counter which may be inserted in a line of roller or power conveyor. Efficient yet inexpensive. Many practical advantages as follows: (a) Controlled speed. (b) Positive apron conveyor construction eliminates slippage. (c) No air or electric power needed to raise package. (d) Package cannot be counted twice. Write for complete details.

Logan Conveyors
LOGAN CO., 215 CABEL ST., LOUISVILLE 6, KY.

▲ For more details circle NED-33 D3 on enclosed inquiry slip ▲

The ARBOR PRESS
You've Been Looking For!



It's the new Manzel 10 Ton Hydraulic Arbor Press...engineered to meet a variety of needs in manufacturing plants and automotive service stations. The long ram stroke and unusual depth and width of throat make it adaptable to straightening, material testing, bending, bearing or bushing work, and many other uses. Gauge is optional.

The press is portable...or can be permanently mounted on bench, column, or wall. Power unit operates 3 times faster. Ram is self-retracting. Write today for complete information.

Jobber inquiries welcome

Manzel
315 Babcock Street
Buffalo 10, N. Y.

▲ For more details circle NED-34 D3 on enclosed inquiry slip ▲

The "Signature" is the finishing touch on your product!

Ever stop to think that your name plate is really the "signature" on your product? Its appearance should reflect your pride; its durability should match the quality of your product. Let us help you create such a "signature." Our skilled craftsmen, long experience and modern equipment insure finest results. Send a rough sketch or blue print for design suggestion and quotation.

Write now for "Etched or Lithographed Metal Products", with full color examples of name and instruction plates.

CHICAGO THRIFT-ETCHING CORPORATION
1555 N. SHEFFIELD AVE., CHICAGO 22, ILL., DEPT. U
SUBSIDIARY OF DODGE MANUFACTURING CORPORATION, MISHAWAKA, INDIANA

▲ For more details circle NED-35 D3 on enclosed inquiry slip ▲

Need VERSATILITY in a portable power mixer?

GET PATTERSON'S TYPICON *and profit!*

BUILT BY THE WORLD'S LARGEST MANUFACTURER OF MIXING EQUIPMENT FOR EVERY PURPOSE

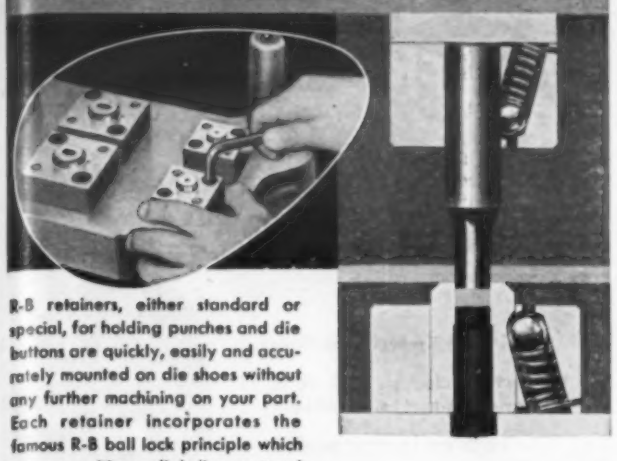
Use this famous mixing unit for your widest range of jobs — transports readily from batch to batch — keeps busy the year round! Direct drive, geared models. Write for Bulletin.

The Patterson Foundry and Machine Company
East Liverpool, Ohio, U. S. A.
The Patterson Foundry and Machine Company, (Canada) Limited
Toronto, Canada

DOES SCORES OF MIXING JOBS
FITS ALMOST ANY TANK
ADJUSTS TO ANY ANGLE
BUILT FOR HEAVY DUTY

▲ For more details circle NED-36 D3 on enclosed inquiry slip ▲

In DIE CONSTRUCTION Save Time



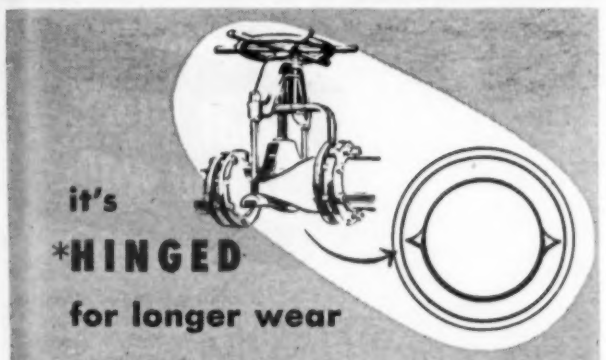
R-B retainers, either standard or special, for holding punches and die buttons are quickly, easily and accurately mounted on die shoes without any further machining on your part. Each retainer incorporates the famous R-B ball lock principle which assures positive radial alignment and vertical locking of punches and die buttons. Because standardized R-B punches, die buttons and retainers are ready for quick assembly in your dies, you save much of your skilled diemaker's time.

Tool standardization is the basis for efficient and economical production. With R-B you get the accepted standard of the sheet metal industry—in standard design features that save in engineering, die construction and operation.

For further information on how you can save time in die construction, write to—

ALLIED PRODUCTS CORPORATION
RICHARD BROTHERS DIVISION
DEPT. 65 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

For more details circle NED-37 D3 on enclosed inquiry slip



it's *HINGED for longer wear

MASSCO-GRIGSBY

RUBBER PINCH VALVES

For abrasive pulps and corrosive liquids
SIZES 1" to 12" DIA.

WRITE FOR FREE BULLETIN

The Mine & Smelter Supply Co.
DENVER 17, COLORADO

*PATENTED

For more details circle NED-38 D3 on enclosed inquiry slip

NEW MODEL ALL-METAL ELECTRIC SPRAY GUN

No Compressor Needed!

No Cartridges—Just Plug in & Use

ENTIRE UNIT UL APPROVED

Here is the trigger-action, lightweight, yet built for heavy duty, all-metal electric Spray Gun ideal for a wide-range of industrial uses. Suitable for all types of work including painting, refinishing, touch-up work, cover-up coats, rustproofing, stenciling, marking, etc. Delivers over 90 lbs. of pressure at 7,200 strokes per minute. No compressor is needed. Just plug into AC outlet and use. This Spray Gun is self-contained and has sturdy vibrator motor in the handle. The entire unit, every part, is fully UL approved, including the 8-ft. S. J. Neoprene Cord & Plug Set. Also included: 25-oz. polished aluminum container, and 5 extra nozzle discs. This model Spray Gun is available only from us. Only $17.95 postpaid.

10-Day Money-Back Guarantee

WALDORF SALES CO.
Dept. AG-2604, 363 Central Park Ave., Yonkers, N. Y.

For more details circle NED-39 D3 on enclosed inquiry slip

MAGNETIC BRAKES with fractional horsepower ratings

Torque ratings of 1½, 3 and 5 lb-ft are specified for fractional horsepower magnetic brakes for all standard alternating or direct current electric motors. Brakes self-adjust for wear, but critical adjustment of torque can be made for precisely timed stops. Units have thermal ratings of 6, 7 and 8 hp seconds per minute, respectively. All brakes have hand release and mount without dismantling. Motor and brakes are connected in parallel, with starting of motor energizing a magnet to release pressure on rotating friction disks. Motors stop instantly and hold the load. Made by **Dings Brakes, Inc.**, 4758 Electric Ave., Milwaukee 46, Wis.

For more details circle NED-40 D3 on enclosed inquiry slip

POLARISCOPE detects strains in glass, plastic

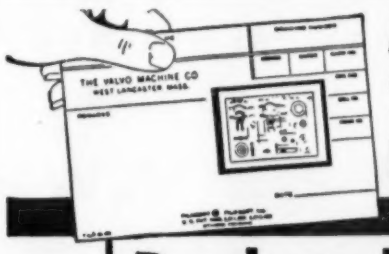
Checking for strains in chemical glassware, determination of the axes in crystal formations, and detection of strains in clear plastics and in glass-to-metal seals are among uses for the model 242.3 hand polariscope. It has an oxidized nonrusting metal frame and makes use of any source of moderate intensity light. Polarizer is fixed in one end of the frame and there is a 3¼-in. space between ends for the object under examination. Filters are made of 3-in. scratch-resistant Polaroid. Made by **Pacific Transducer Corp.**, 11921 P. Pico Blvd., Los Angeles 64, Calif.

For more details circle NED-41 D3 on enclosed inquiry slip

MAGNETIC TRAP installable in vertical down-pipe

Designed primarily to protect pumps and refiners, this magnetic trap is installed in a section of the vertical down-pipe. This position takes advantage of the force of gravity to drive the flow of material containing tramp iron directly onto the magnet's face. Stainless steel angle guides facilitate mounting unit in 24-in. diameter pipe with baffles. Sizes are available to accommodate volumes ranging from 1500 to 5000 gpm. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie, Pa.

For more details circle NED-42 D3 on enclosed inquiry slip



A 24"x36" DRAWING

Ready to be filed!

Need more vault space in your engineering department? . . . Need a faster way to find and use your engineering drawings? Filmsort® will give you *both!*

Filmsort — individualized microfilm in file cards — combines the reduced microfilm image of a drawing with any popular card filing system. Filmsort condenses your drawings; makes them easier to file and find — in a fraction of their present space. Don't wait! Write — right now — for the money-saving solution of your drawing, specification or data filing problem.

FILMSORT Individualized Microfilm!

It's in the cards

FILMSORT INC.
DEPT. I, PEARL RIVER
NEW YORK

For more details circle NED-43 D3 on enclosed inquiry slip

SOLVE EXTREME PRESSURE LUBRICATION PROBLEMS

The new miracle molybdenum disulfide lubricant.

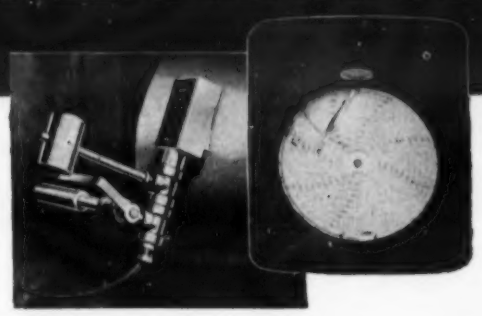
Anti-Seize is a stable non-melting, multi-purpose molybdenum disulfide lubricant having a phenomenal capacity to prevent seizing and galling at bearing pressures well over 100,000 pounds per square inch. Anti-Seize will lubricate at temperatures below sub-zero and up to 750 degrees F.

Write today DEPT. NED. for new literature and get the complete story.

MANUFACTURERS OF SPECIAL LUBRICANTS
BEL-RAY CO., INC.
MADISON, NEW JERSEY

For more details circle NED-44 D3 on enclosed inquiry slip

NOW! CONTINUOUS MEASUREMENT OF ROLL SURFACE TEMPERATURES



SPECIFICALLY DEVELOPED for rolls, belts, and other moving surfaces used in grinding, drying, conveying, and forming food products. Saves steam, reduces waste, improves product quality.

The system consists of an entirely new type of measuring head . . . plus a Dynalog* Electronic Recorder or Controller. Minimizes ambient or radiant temperature errors. No scoring of the roll. Operating range: −40°F to +350°F; higher under some conditions. Write for Bulletin 405. **The Foxboro Company, 664 Neponset Avenue, Foxboro, Mass., U. S. A.**

FOXBORO Reg. U. S. Pat. Off. INSTRUMENTATION RECORDING • CONTROLLING INDICATING

For more details circle NED-45 D3 on enclosed inquiry slip

Poro-Stone Filtration FOR COMPRESSED AIR

EFFICIENTLY REMOVES:
OIL, WATER
PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS Poro-Stone AIR FILTER

For more details circle NED-46 D3 on enclosed inquiry slip

Moly-sulfide
A LITTLE DOES A LOT

shows up best where the frictional conditions are difficult

The case-histories of 154 difficult friction problems in the shop and in the field, all successfully solved, are described in a new 40 page booklet. It is where conditions are extreme that *Moly-sulfide* excels over other lubricants. If you encounter extreme conditions of pressure, temperature or velocity, send for this free booklet.

Climax Molybdenum Company
500 Fifth Avenue · New York City 36 · N·Y

MS-9A

For more details circle NED-47 D3 on enclosed inquiry slip

HARD-HITTING! RUGGED! COMPACT!

"Super Slugger"

The Electric Hammer With The Neoprene "Cushion-Snap"—

NO KICK!

7½ LBS.
LIGHT-WEIGHT
HEAVY-DUTY

NEW TYPE HAMMER Delivers "Terrific Wallop"!

CHECK THESE ADVANTAGES—

New method of impact motion ✔ Hard hitting, powerful blow ✔ No kick on armature or operator ✔ Rugged, finest materials ✔ Dependable performance ✔ Compact, fits tight places ✔ Light weight — one hand operation ✔ Portable-plug in anywhere (A.C. or D.C.) ✔ Adaptable — with tools for every kind of work ✔ Easy maintenance, simple lubrication ✔ Keeps cool with built-in fan ✔ Power head can be rotated 180° ✔ Low in cost — can save time, trouble, money for you!

DOES HUNDREDS OF DIFFERENT JOBS

Drills Concrete • Drills Masonry • Cuts Sheet Metal • Chips or Channels Concrete or Metal • Cleans Mortar Joints • Scales Rust • Strips Old Flooring • Caulks Soil Pipe • Cleans and Peens Welded Joints

Write FOR CATALOG
On "Super Slugger" and Line of Tools
Manufactured by Noble & Stanton, Inc., Bedford, Ohio

TEMPO PRODUCTS CO.
1900 EUCLID AVE. • CLEVELAND 15, OHIO

☐ Please Send Catalog, Prices and Complete Data
☐ Please Arrange Demonstration of Super Slugger

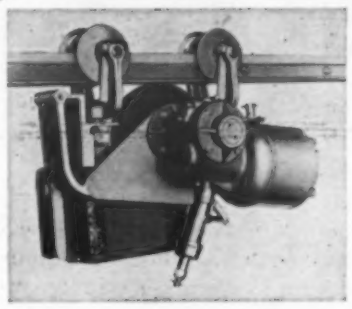
NAME TITLE
COMPANY
STREET
CITY STATE

Dealers—Write for Information

B

For more details circle NED-48 D3 on enclosed inquiry slip

MONORAIL DRIVE UNIT
directly driven by rubber wheel



Direct, right-angle motor drive through a 2½ x 8-in. rubber wheel is provided by this MonoTractor for propulsion of ordinary loads on MonoRail track, not exceeding 1-ton capacity, on electric hoists or other MonoRail carriers. Wheel is adjustably spring loaded against bottom of track. Fabricated mounting frame allows easy access for replacement by means of hinged construction. Unit is made with pushbutton control for either drive unit alone or combined with electric hoist operation. Made by **American MonoRail Co.**, 13116 Athens Ave., Cleveland 7, O.

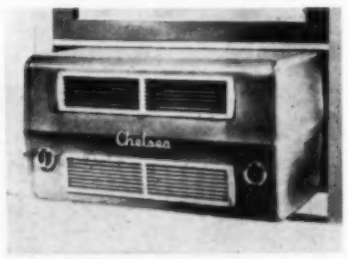
For more details circle NED-49 D3 on enclosed inquiry slip

SNAGPROOF NUT
protects against screw point

By shielding the points of screws, the type J Speed Nut protects upholstery and fabrics against snagging, as well as offering protection against personal injury or product damage by scratching. Special nut has a rigid integral flap curving up and back over the point of the screw where it comes through the nut. Made by **Illinois Tool Works**, Shakeproof Div., Dept. K, St. Charles Rd., Elgin, Ill.

For more details circle NED-50 D3 on enclosed inquiry slip

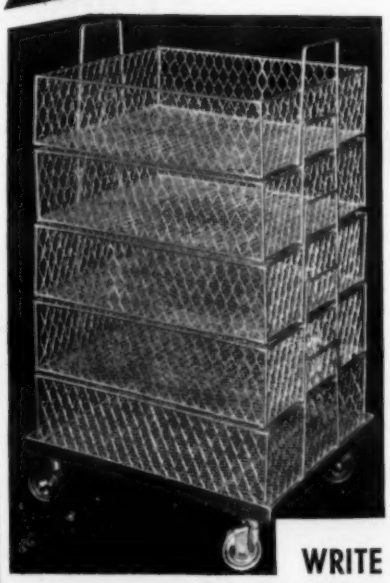
ROOM AIR CONDITIONER
two fans operate quietly



Cooling, dehumidifying, ventilating and air cleaning functions are performed by type RMC room air conditioner which has all controls located on front. A temperature control is available for the Tecumseh compressor-equipped unit that uses Freon-12 as a refrigerant. One motor drives two fans at 1050 rpm for quiet operation. Aluminum mesh filters can be removed for change and inspection. Grill has wide deflector vanes to eliminate drafts. Air conditioner is available in three sizes for cooling rooms of 1840 to 3600 cu ft. Made by **Chelsea Fan & Blower Co.**, Dept. NED, 639 South Ave., Plainfield, N. J.

For more details circle NED-51 D3 on enclosed inquiry slip

TOPS IN FEATURES
YET LOW IN PRICE



NEW
Materials Handling Basket Combination

- Safe, sturdy, durable—backed by manufacturer with 33 years experience making materials handling equipment.
- Stack-Lock design. Handles of each basket nest into handles of basket below locking stack safely together.
- Can be supplied with either caster dolly, or fork-lift pallet.
- Baskets, dollies or pallets supplied separately or in combinations, one or a thousand.
- Baskets made especially to suit your needs — any size, with dollies or pallets for single or multiple stacking.

WRITE FOR PRICE LIST

New bulletin (F3) on Hoff Crafters Trucks, Racks, Dollies, Trays, Baskets, with price list, will be mailed to you without obligation. Write today.

HOFFMAN COMPANY
41-43 N. PENN ST., YORK, PA.

For more details circle NED-52 D3 on enclosed inquiry slip

THE NAME THAT SYMBOLIZES
RENFROE THE *Finest* IN *Steel Lifting Clamps*

This Sturdy, Versatile, Safety Snap Lock Clamp meets with all your requirements for...

- ✔ Maximum Speed and Safety
- ✔ Vertical clamps in 2, 4, 8, 12 and 20-ton capacities
- ✔ Lock on in any position
- ✔ Lock off in any position
- ✔ Exceptionally light in weight
- ✔ 5 to 1 Safety Factor
- ✔ The toughest clamp ever built

J. C. RENFROE & SONS, INC.
1259 WEST STATE STREET • P. O. BOX 4279
JACKSONVILLE, FLORIDA

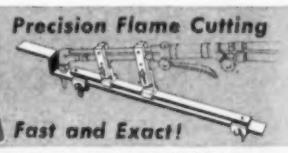
For more details circle NED-53 D3 on enclosed inquiry slip

What shape do you want?

Now you can accurately, easily flame cut all kinds of shapes—circles, angles, bevels, straight lines. NEECO cutting guides convert ordinary hand torches into precision cutting instruments. Attached quickly—without tools. Neat, clean cuts need little or no grinding or machine finishing. Models to fit all torches, from 70° to 90° types. Cut circles from 1 to 66 inches diameter. Every shop should have these new guides—as basic, time saving tools or as standby equipment.

Write for complete information and model selection data.

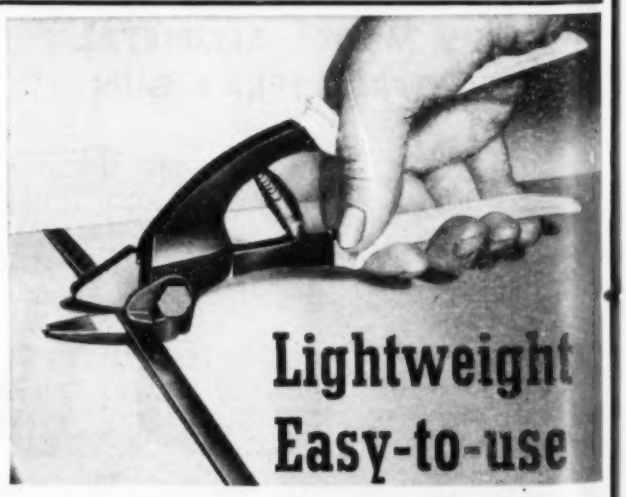
Precision Flame Cutting



NEECO
Fast and Exact!

NEW ERA ENGINEERING CO.
458 West 29th Street • Chicago 16, Illinois

For more details circle NED-54 D3 on enclosed inquiry slip



Lightweight Easy-to-use Strap Cutter

This lightweight cutter cuts steel strapping swiftly and easily with just the pressure of your hand.

Weighing just one pound and only 9½ inches long—Acme Steel's E14AO Strap Cutter cuts steel strapping up to ¾ inch. Built-in band guide keeps strap from turning on edge or wedging between blades. Write Acme Steel Products Division, Dept. NED-43, 2822 Archer Avenue, Chicago 8, Illinois.

Strap It . . . Stitch It . . . Ship It . . . Safely

ACME STEEL

For more details circle NED-55 D3 on enclosed inquiry slip

FORMULA 602 VS. CARBON TETRACHLORIDE

(report by independent test laboratory)

FORMULA 602
Ten healthy adult albino rats inhaled 125 parts FORMULA 602 per million parts air in an inhalation box for 30 minutes. This was repeated daily for 14 days. At the end of this time ABSOLUTELY NO ILL EFFECTS OR DEATHS OCCURRED!

CARBON TETRACHLORIDE
After 30 minutes exposure to 125 parts carbon tet per million parts air in an inhalation box, seven out of ten rats died. The following day, the remaining 3 rats died after another 30 minutes exposure. CARBON TET KILLED ALL THE RATS!

FORMULA 602 CLEANS MOTORS AND ALL ELECTRICAL EQUIPMENT

FORMULA 602 cleans without leaving a residue, corroding metals or damaging electric insulation. Use it wherever carbon tet is used for cleaning!

SEND FOR FULL INFORMATION TODAY

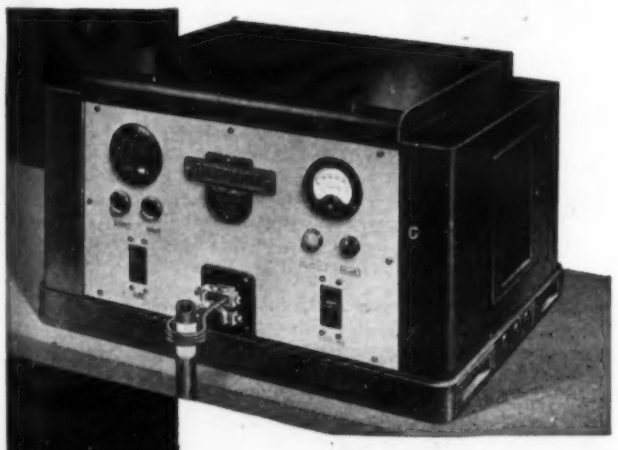
the PENETONE co.

BOX ND-453 TENAFLY, NEW JERSEY

For more details circle NED-56 D3 on enclosed inquiry slip

MODEL 50 *Versatile* *Low Cost* ELECTRONIC

THER-MONIC INDUCTION HEATING UNIT



BRAZING
SOLDERING
HARDENING
ANNEALING
MELTING

FOR THE PRODUCTION LINE, TOOL ROOM or LABORATORY!

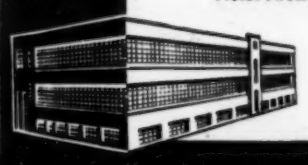
THER-MONIC, pioneer in the field of Induction Heating, offers the only completely contained, electronic generator for continuous production runs with either automatic or hand-feeds, or on small production runs which involve frequent work change-overs. Hundreds already in use; all are acclaimed by owners and operators.

Delivers ready for use—operates on 110V., 60 cycles. Rated in accordance with NEMA standards. Built & certified in accordance with F.C.C. regulations. Unit is similar to our larger sized, high production models. Furnished complete with timer and output transformer. Designed for safe, low voltage work coils.

THER-MONIC INDUCTION HEATING CORP. NEW YORK

$985. F.O.B. Factory

Fully guaranteed. Service and sales in principal cities. Write for literature.

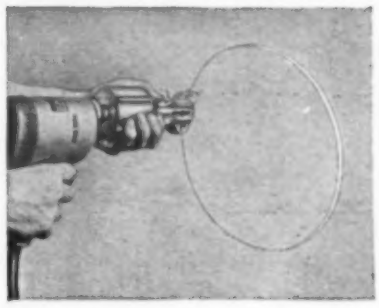


Generators available up to 75 KW output.

INDUCTION HEATING CORPORATION
181 WYTHE AVENUE • BROOKLYN 11, N. Y.
Largest Producers of Electronic Heat Treating Equipment

For more details circle NED-57 D3 on enclosed inquiry slip

SAW ATTACHMENT for air or electric drills



Electric or air drills furnish the power for the Acro Saw which is adaptable to the cutting of stainless steel, Monel and other metals, as well as wood and plastic. Unit attaches to the drill spindle or can be secured in a drill chuck. It fits both ¼ and ½-in. drills and has a ⅞-in. stroke. The operator can guide the saw to cut any curve or angle. Saw cuts directly into wood without drilling a starting hole. Power filing is performed by inserting a file instead of a saw blade in the 4-lb attachment. Made by **Acro Tool & Die Works,** 4552 Broadway, Chicago 40, Ill.

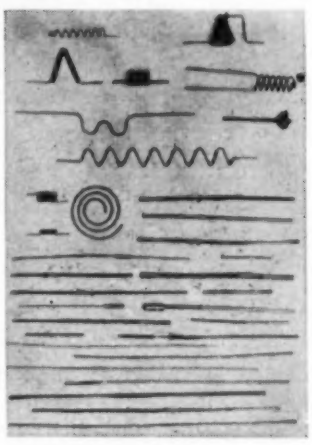
For more details circle NED-58 D3 on enclosed inquiry slip

CONDENSATE COOLER is shell and tube type unit

Designed for use as economizer, water preheater, heat exchanger and other purposes, this condensate cooler has working pressure of 125 psi and is available in shell diameters of 4 to 16 in. and tube bundles 2 to 8 ft long. Steel shell houses ¾-in. copper tubes assembled in removable U-bend bundles. Head is cast iron. Bronze head and tube plate are available as optional construction. Made by **Taco Heaters, Inc.,** 135 South St., Providence 3, R. I.

For more details circle NED-59 D3 on enclosed inquiry slip

ELECTRONIC COILS & LEADS are made to specification



Coils of tungsten and molybdenum, hand wound to customer's specifications, are available for use as emitters, filaments, coiled coils and other electronic applications. Also offered are leads of uniform quality, with or without beading, made of tungsten, molybdenum, nickel, nickel-clad copper and alloys. Made by **Electronic Parts Mfg. Co.,** P. O. Box 261, Union City, N. J.

For more details circle NED-60 D3 on enclosed inquiry slip

Where to use INSUL-MASTIC *Coatings*

These *Superior* coatings can end many problems in your plant for many years to come.

- They prevent corrosion from moisture, acids and other chemicals!
- They control condensation or sweating!
- They insulate!
- They stop walls and roofs from leaking!
- They keep insulation dry and protected!
- They deaden sound!
- They attractively resurface old buildings!

A 44-page catalog will give you more ideas for employing INSUL-MASTIC *Superior* coatings. Write for it today.

Insul-Mastic
CORPORATION OF AMERICA
Oliver Building • Pittsburgh 22, Pa.
Representatives in Principal Cities

For more details circle NED-61 D3 on enclosed inquiry slip

WEBB TOWVEYOR*

for FASTER, EASIER and SAFER MATERIALS HANDLING

FASTER—Towveyor chain automatically picks up load when pin attached to truck is dropped into slot. Material is delivered to destination without wasted traveling time.

EASIER—Minimum handling of loads by personnel—trucks engage Towveyor chain or are disengaged at any point with a simple lowering or raising of towing pin.

SAFER—Clear floors with no obstacles for employees to walk or truck over, and there are no overhead chains or supports to present safety hazards.

Cut your handling costs with a "Towveyor" system that will speed up distribution, permit faster filling of orders and easier loading or unloading of freight cars and trucks.

*TOWVEYOR is a registered trademark identifying floor truck conveyors manufactured and installed by the Jervis B. Webb Company.

For Further Information, Please Write To:

JERVIS B. WEBB COMPANY
8921 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES
CONVEYOR ENGINEERS AND MANUFACTURERS

For more details circle NED-62 D3 on enclosed inquiry slip

DRAFT-FREE COOLING . . . *Low-Cost Comfort*

The Wilster room air circulator creates a constant flow of natural draft-free air—for cooling in summer, and for even heat distribution in winter. The louver design insures even circulation to all parts of the room. A single unit circulates air completely every three minutes in 5000 cubic feet of space.

Automatic circulation thermostatically controls air flow without harmful drafts. Easily installed: simply hang it, and plug in.

Installations in offices, drafting roofs, factories, cafeterias, etc., are providing more comfortable year around working conditions. An inexpensive way of solving your air conditioning problems. WRITE NOW FOR A FOLDER.

WILSTER, INC.
1325 East 152nd St. East Cleveland 12, Ohio

For more details circle NED-63 D3 on enclosed inquiry slip

New 3M Product

Provides Gasket-like Seal for Metal Corners, Surfaces

Wherever solid slab corners need sealing . . . wherever faying surfaces require water-tight protection—you can use EC-1202, 3M's flexible new sealer.

Made of synthetic rubber ribbon, EC-1202 is reinforced with sturdy fabric for strength, which helps it hold its dimensions . . . makes it easy to apply.

Available in widths ranging from ¼" to 2", in ¼" increments, EC-1202 is offered in 100' rolls, 1/16" thick . . . in 200' rolls, 1/32" thick. Why not consider it for your sealing needs?

For more complete details, write to 3M, Dept. 84, 411 Piquette Avenue, Detroit 2, Michigan.

3M COMPANY

MINNESOTA MINING AND MANUFACTURING COMPANY

see our catalog in $ PRODUCT DESIGN FILE or write for copy

For more details circle NED-64 D3 on enclosed inquiry slip

Be fresh... Stay fresh

wear a DUPOR water-cooled SMOKE MASK

Equipped with "Nod & Shake" Fog-Proof, Gas-Tight Goggles

For combined eye and lung protection of painters, foundrymen, smelters, oil refiners, chemists, firemen, etc. Sponge filter, soaked in water before wearing, keeps out paint spray, smoke, fumes, dusts; provides cool, clean air at every breath. Air-tight goggles give absolute eye protection. Goggles are fog-proof too.

Sample sent $5.00 pp

H. S. COVER, South Bend, Ind.

▲ For more details circle NED-65 D3 on enclosed inquiry slip ▲

Two belt conveyors handle in-process forms; accumulation conveyors (diagonal spur sections) hold orders for release to shipping; main line roller conveyor takes cartons to stapling operation and on to shipping room.

BUSCHMAN CONVEYORS save $10,000 to $12,000 annually at UARCO Inc.

After stapling, cartons are elevated by BELTEVATOR to gravity roller conveyor which carries them to shipping room.

Over a third-mile of belt and roller conveyors replaces skid system . . . save 2,000 square feet of floor space . . . 30% in man hours!

Typical of "pay-for-themselves" records set by BUSCHMAN Conveyor installations is this one in the Chicago plant of UARCO Inc., noted business form manufacturer.

A main powered roller conveyor skirts the printing area, two belt conveyors and forty-six accumulation gravity conveyors achieve a 30% cut in time over the former skid load system.

From long experience, BUSCHMAN Engineers can suggest time, money and space saving equipment for the handling of your materials from receiving through process, assembly and finishing to storage or shipping. BUSCHMAN Conveyor installations are complete to meet your specific needs—dictated by your products, process and space available.

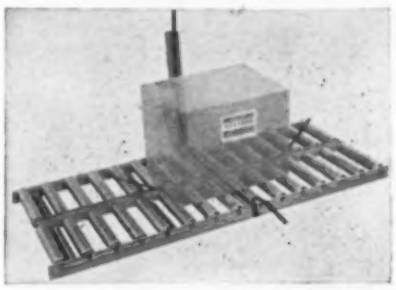
Write for Bulletin No. 60

PRODUCE MORE...FOR LESS Buschman Conveyors

The E. W. BUSCHMAN Co.
Spring Grove at Winton Place
Cincinnati 32, Ohio
Representatives in Principal Cities

▲ For more details circle NED-66 D3 on enclosed inquiry slip ▲

CARTON BANDING AID
functions as part of conveyor line



Easy passage of steel strapping or other banding tape through underpass and up to vertical deflector channel, plus a channeled midrib to receive the lengthwise band from a separate roll under the unit are features of this Banding Helper conveyor. It functions as part of standard conveyor line and is available in standard and special widths and lengths to fit any installation. Made by **Metzgar Co.**, 416 Douglas St. N.W., Grand Rapids 4, Mich.

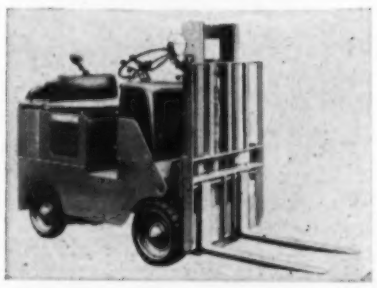
▲ For more details circle NED-67 D3 on enclosed inquiry slip ▲

SHOP VEHICLE
for interplant transportation

Equipped with automatic drive, friction reverse and quick-action brakes, the three-wheel Jobster gasoline vehicle can be used for interplant transportation or intraplant errands. It has a trunk on rear for carrying various materials. Power is furnished by a 2½-hp engine which develops speeds up to 25 mph and gives 80 to 100 miles per gallon of fuel. As no foot operation is required, use can be by the physically handicapped. Made by **Hatfield Engineering Co.**, Dept. NED, 1300 W. Bristol St., Elkhart, Ind.

▲ For more details circle NED-68 D3 on enclosed inquiry slip ▲

TRUCK LIGHT COMBINATIONS
optional for extra work shift use



A selection of lighting combinations for all Towmotor fork lift trucks and tractors is now available optionally as original equipment. Floodlight, taillights and stoplights can be furnished in varied arrangements to meet individual requirements. Single-switch or multiswitch controls can also be furnished as well as a red stop-light operated from brake pedal. Offer is made by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

▲ For more details circle NED-69 D3 on enclosed inquiry slip ▲

PRES-ON® ABRASIVE DISCS and FLEXIBLE DISC HOLDERS

PRES-ON ABRASIVE DISCS are used for roughing, cleaning and finishing operations on Dies, Moulds, Castings, Forgings and Metal Patterns. They can be used on all types of grinders. Coated with pressure sensitive adhesive of exceptional holding strength, application is made in seconds by "pressing the disc on". Disc is held firmly and will not slide. For replacement it easily peels off. Used with PRES-ON Flexible Disc Holders which are made of soft flexible rubber capable of conforming to the severest contours without digging. Discs available in ½" to 20" dia., Grits 24 to 320.

WRITE FOR CIRCULAR AND PRICE LIST

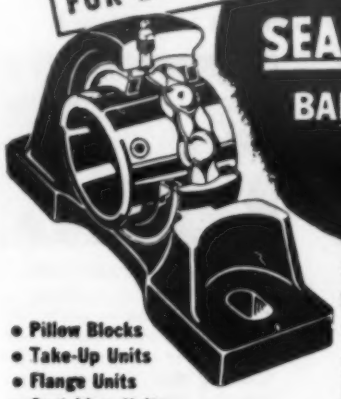
THE Metal Removal Co.
1546 N. ORLEANS STREET • CHICAGO, ILLINOIS

▲ For more details circle NED-70 D3 on enclosed inquiry slip ▲

Recommended

FOR LONG DEPENDABLE SERVICE

SEALMASTER BALL BEARING UNITS



• Pillow Blocks
• Take-Up Units
• Flange Units
• Cartridge Units
• Flange Cartridge Units

• PERMANENTLY SEALED SealMasters' patented centrifugal seal permanently seals out dirt—seals in lubricant—increases bearing life and reduces maintenance problems.

WRITE FOR CATALOG No. 845

Bearing Division
STEPHENS-ADAMSON MFG. CO.

Tellevel—Bin Level Controls · Car Loaders · Variable Speed Reducers · SealMaster Ball Bearings · Car Pullers · Winches · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILL.

▲ For more details circle NED-71 D3 on enclosed inquiry slip ▲

BEND, MELT, SOLDER, BRAZE

LOW COST... only $6.95 Retail

faster and more easily with completely PORTABLE BERNZ-O-MATIC

Instant lighting TORCH

Here is the ideal tool for all general factory maintenance and production line work.

- *LIGHTWEIGHT*—only 3 lbs. full.
- *PORTABLE*—fits in tool box or pocket. No heavy tanks or tangling hoses.
- *LOW COST*—only $6.95 (retail).
- *LONG BURNING*—disposable self-sealing cylinder has enough fuel for up to 15 hours burning time. When empty replace for only $1.95 (retail). Many accessories such as soldering tips, belt clip, stand, etc.

Stocked by leading hardware, plumbing, automotive and electrical wholesalers and mill supply houses. Or write for catalog page.

OTTO BERNZ CO., INC.
280 LYELL AVENUE • ROCHESTER, N. Y.

▲ For more details circle NED-72 D3 on enclosed inquiry slip ▲

If YOU USE... OR CAN USE RUBBER

MOLDED OR FABRICATED IN ANY WAY, SHAPE OR FORM

GROMMETS
VACUUM CUPS
SPRING, SLAB
BUMPERS
BUSHINGS
EXTRUSIONS
CYLINDER
TUBING
GASKETS
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LARGEST DIVERSIFIED STOCK OF SPONGE IN U.S.A.

Consult our Experts Without Obligation

Whatever your problem may be concerning Molded, Extruded, Lathe-Cut or Fabricated Natural or Synthetic Rubber, Atlantic India can help you.

Our laboratories and staff of engineers plus three decades of experience are your guarantee of satisfaction.

Latest Catalog Now Available

ATLANTIC INDIA RUBBER WORKS, INC.
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▲ For more details circle NED-73 D3 on enclosed inquiry slip ▲

NO EMPTY BINS! OVERFLOW!

S-A TELLEVEL Automatic bin-level control

FOR BINS, HOPPERS, TANKS, ETC.

Provides continuous, dependable level control for bulk materials or liquids. Mount Tellevels near top and bottom or at various levels in bins, tanks, etc. Rising or falling material moves light float-ball stops or starts conveyor, elevator or pump. Normal duty, heavy duty and explosion-proof models.

Write for TELLEVEL Bulletin 11-0

STEPHEN S-A ADAMSON MFG. CO.

TELLEVEL Bin Level Controls • SealMaster Ball Bearings
Car Loaders • Car Pullers • Winches • Saco Speed Reducers
12 RIDGEWAY AVENUE, AURORA, ILL.

For more details circle NED-74 D3 on enclosed inquiry slip

Machine flame cutting for every metal-working shop

Cut-O-Matic is NCG's portable motor-driven track guided machine that brings the advantages of machine flame cutting to shops of any size. It costs only $210.00. It weighs only 50 lbs. Easily carried about the shop, it sets up rapidly and cuts steel plates, stacked steel sheets or heavy slabs so cleanly and accurately no further finishing is necessary in most cases. It cuts square or beveled edges, in straight lines, circles, strips and some irregular shapes. It is so versatile, useful, easy to operate that most shops will speed production, save time, labor, handling and materials. Booklet N-134 tells about Cut-O-Matic. Send for a free copy today.

Copyright 1953, National Cylinder Gas Company

NCG® National Cylinder Gas Company
840 N. Michigan Ave., Chicago 11, Illinois

For more details circle NED-75 D3 on enclosed inquiry slip

New Way to package parts!

SHERMAN SPOT-SEAL WRAPS PARTS QUICKLY, PROTECTS FROM DUST AND SCRATCHES. Spot-Seal is a coated wrap that sticks only to itself. Wrap it over the parts, press it together . . . the parts are sealed.

Ideal for wrapping sub-assemblies, replacement kits, or multiple parts in one package, Spot-Seal makes a tight, dust-proof, water-repellent, tamper-proof wrap. Easy to identify, less chance of loss of parts. Write for free samples today, Dept. Q.

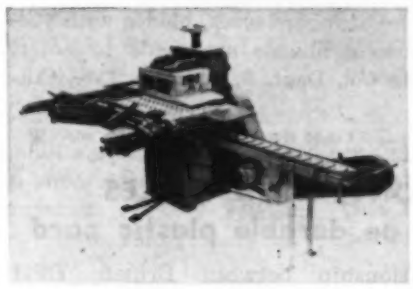
Sherman PAPER PRODUCTS CORPORATION
NEWTON UPPER FALLS 64, MASS.
CHICAGO LOS ANGELES NEW YORK

For more details circle NED-76 D3 on enclosed inquiry slip

IMPORTANT

If you have not returned one of our regular questionnaires or sent us an inquiry during the past year, will you please fill in the coupon at the bottom of the inquiry slip in this issue and return it to us? No postage is required. The Controlled Circulation Audit, to which we belong, requires that we verify each name on our mailing list regularly. Therefore, if you want to continue receiving NEW EQUIPMENT DIGEST each month, you must send us an inquiry slip or return the circulation questionnaire which is sent to you.

LABEL CUTTER
die cuts automatically from sheets



Labels, tickets, capsules, small wrappers, disks and shaped cardboard blanks can be die cut directly from printed or plain sheets by the Strong automatic label cutter. Made in England, the machine can produce 150,000 labels per hour with a single die. Operator assembles a pile of 100 sheets, jogs them for register, then applies glue to their edge so that they cannot shift while being cut. Stack of sheets is inserted in the machine and registered in relation to the cutting knives. Machine starts on one row of labels and automatically moves from one label to the next in that row. After each cut, it ejects a pile of 100 finished labels on a conveyor belt. Available from **Hobbs Mfg. Co.,** Dept. NED-1, 26 Salisbury St., Worcester 5, Mass.

For more details circle NED-77 D3 on enclosed inquiry slip

EQUALIZING SLING
legs adjust to load automatically

Offered in range of nine sizes with capacities from ¾ to 28 tons, Adjust-A-Leg equalizing slings for use on crane hooks facilitate materials handling operations. Safety factor of 5 to 1 has been maintained at 45 degrees, and two-thirds of the rated load can be carried on one leg without slippage. Locking device enables wire rope legs to be locked frictionally in place. As the crane operator applies load tension, the rope is drawn into the V-groove to depress the spring mounted roller and lock the rope until tension is released. Standard and special leg lengths are available. Made by **Caldwell Co.,** Dept. NED, 1830 Camp Ave., Rockford, Ill.

For more details circle NED-78 D3 on enclosed inquiry slip

CHANGE RESTROOM FEAR into EMPLOYEE APPRECIATION with Sanitor

SEE FOR YOURSELF ABSOLUTELY FREE!

TISSUE TOILET SEAT COVERS

● HAVE HAPPIER EMPLOYEES ... BETTER WORKERS

As all personnel executives know, happier workers are more efficient, produce more. No matter how clean you keep your restrooms, there is always a lingering fear of infection. Sanitor tissue toilet seat covers assure hygienic conditions. Employees, visitors too, appreciate this indication of respect for their decency.

● CUT RESTROOM MAINTENANCE COSTS; END PLUMBING STOPPAGES

Sanitor tissues *automatically* flush away, *can't* clog drains. Eliminate plumbing breakdowns caused by use of newspaper, paper towels, etc., as improvised seat covers.

● ELIMINATE WASTE

Stop wasteful use of toilet tissues and paper towels as makeshift seat covers. This saving *alone* more than pays for Sanitor covers!

Limited to industrial users only! We'll send you free of charge, with no obligation whatsoever: (1) An attractive Sanitor metal dispenser with exclusive one-at-a-time ejector; (2) A generous supply of Sanitor tissue toilet seat covers. It's yours *permanently*—you need *not* return it! We want you to see how efficiently and economically Sanitor solves serious restroom problems.

WRITE for free Sanitor dispenser, tissue toilet seat covers and literature.

SANITOR MFG. CO., Dept. 5
Kalamazoo, Michigan

For more details circle NED-79 D3 on enclosed inquiry slip

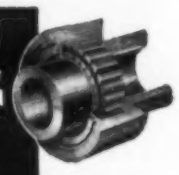
USERS OF
CLUTCHES
OVER-RUNNING • BACKSTOP • INDEXING

GET THIS FOLDER FOR YOUR FILES!

Explains why FORMSPRAG Clutches give greatest possible torque capacity for size and weight. Shows how the sprags grip at infinite number of positions—no backlash. Also contains basic engineering data.

FORMSPRAG COMPANY
23595 Hoover Road • Van Dyke, Michigan

FULL COMPLEMENT FORMSPRAG Clutches
Distributors in principal cities



For more details circle NED-80 D3 on enclosed inquiry slip

RECEIVING...PRODUCTION... WAREHOUSE...SHIPPING... MAINTENANCE

every department can use the CM CYCLONE HIGH-SPEED—HEAVY DUTY—ALUMINUM ALLOY CHAIN HOIST

CAPACITIES: ¼ TO 10 TON

● Help your men get lifting jobs done quicker, safer, with less physical effort. Increase labor dollar return. PORTABLE—Carry with one hand. EASY OPERATION—Less hand chain pull. LOW HEADROOM—Highest possible lift. HERC-ALLOY flexible welded load chain. Lifetime lubrication. *More CYCLONE Hoists are in use today than any other hoist in their class.*

CYCLONE CATALOG NO. 145
Illustrates, describes and prices all models. Sent on request or ask your CM Distributor.

CHISHOLM-MOORE HOIST CORPORATION
(Affiliated with Columbus McKinnon Chain Corporation)
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See us at Booth 1526—Philadelphia—May 18-22
5th NATIONAL MATERIALS HANDLING EXPOSITION

For more details circle NED-81 D3 on enclosed inquiry slip

AN INDISPENSABLE FIRST-AID INSTRUMENT

G-S EYE SWEEP

Double Purpose MAGNET AND LOOP

For removing metallic particles, dirt, chips, any foreign matter from the eye. **$2.50**

Magnetic tip easily picks up the smallest piece of iron or steel. Flexible loop is very convenient for removing cinders, dirt and *non-magnetic* particles.

Sterilization will not affect magnetic properties or loop. A hard rubber carrying case is provided with each G-S Eye Sweep.

ORDER TODAY DIRECT OR SEND FOR COMPLETE DATA

A DEPENDABLE GUIDE TO SAFETY
GENERAL SCIENTIFIC EQUIPMENT COMPANY
TESTED INDUSTRIAL SAFETY PRODUCTS

2701 W. Huntington St., Philadelphia 32, Pa.
RESPIRATORS • PUMPS • GOGGLES • SHIELDS • GLOVES • APRONS • HELMETS

For more details circle NED-82 D3 on enclosed inquiry slip

NEW!

7 WAYS BETTER
1. No diaphragm, no oiling
2. Accurate
3. Adjustable
4. Simple
5. Rust & weather-proof
6. More Economical
7. Guaranteed

PRECISION LONG-LIFE Pressure Switch

for water, air and hydraulic pressures that

GUARANTEES Trouble-Free Operation
(eliminates troublesome DIAPHRAGM)

At last—a new, yet proven, pressure switch that completely outmodes old-fashioned switches—brings you new important benefits: No wearable moving parts, no rubber diaphragm to dry and crack, no oiling necessary. This one all-purpose switch eliminates inventory and storage headaches. High and low pressure limits adjust independently, 100 lb. range. Snap-action contact unit has life expectancy of 1,500,000 operations. And Simple guarantees it for 2 years against *operation failure*, not just workmanship and materials. Investigate!

Interchangeable with any other make switch

write for New Bulletin of Specifications

SIMPLE MANUFACTURING CORP. SYRACUSE N. Y.

For more details circle **NED-83 D3** on enclosed inquiry slip

What Pre-Cut Panel Parts

CAN YOU USE?

Here's one way you can improve product quality and reduce costs in assembly, manufacturing, finishing, packing, shipping and display

Upson has specialized facilities for high volume, low cost production of cut-out panel parts in any size from 1" x 1" to 8 feet x 18 feet *to your specifications.* We include all necessary holes, openings and outline cutting in producing the size, shape, grade, thickness and even *finish* in the product parts you need.

Savings of 20 to 50 per cent are frequently made by getting panel parts pre-cut in exact size and shape to speed up assembly, reduce handling, eliminate waste, minimize shipping and storage problems. Get Upson quotations on your panel or fibre board parts . . . especially if you are now punching, drilling or cutting such parts by ordinary shop methods.

It will pay you to investigate the quality and low cost of Upson cut-out panel parts—*ready for use!*

Write us your requirements or mail the coupon below for our free informative booklet.

THE UPSON COMPANY
734 Upson Point
Lockport, New York

Send me your free booklet, "Better Fibre Board Parts and Cut-outs."

Name _____

Company Name _____

Street _____

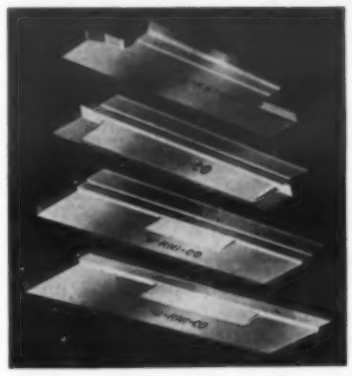
City and State _____

UPSON

QUALITY YOU CAN TRUST

For more details circle **NED-84 D3** on enclosed inquiry slip

WORK REST BLADES & GUIDES
designed for centerless grinders

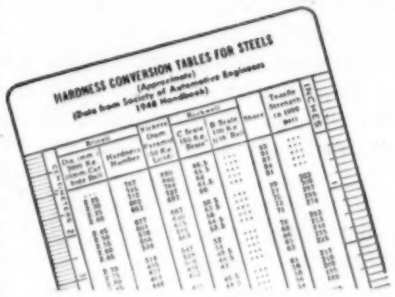


Extreme hardness and long life are given this line of centerless grinder work rest blades and guides by heat treating of the high speed steel blades. They also have high finishes and close tolerances. Included in the line are inserted carbide blades and others of cast alloys or iron. Besides standard sizes, blades with special contours, angles or shapes are made to order. Made by **Ohio Knife Co.**, Dept. 8, Dreman Ave., Cincinnati 23, O.

For more details circle **NED-85 D3** on enclosed inquiry slip

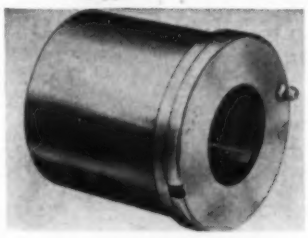
HARDNESS CONVERSION TABLES
imprinted on durable plastic card

Approximate relationship between Brinell, DPH (Vickers), Rockwell and Shore Scleroscope hardness values and corresponding tensile strength values of steels are readily obtained from this 2¾ x 5-in. wallet-size celluloid card entitled "Hardness Conversion Tables for Steel." One edge is imprinted with 10-cm scale and other with 4-in. scale for precise measurements. Data given are based on SAE Handbook. Card is available free from **International Nickel Co.**, 71 Wall St., New York 5, N. Y.



For more details circle **NED-86 D3** on enclosed inquiry slip

NEEDLE BEARING PILOT BUSHING
has absolute seal of bearing cavity



Providing absolute seal against entrance of dirt, coolants and grit, needle bearing pilot bushing is available with inside diameters of 0.0257 to 2 in. They provide maximum bar support because of their overall length. Quills can be adapted to receive keys or keyways. Bearings can be disassembled without removing housing, and they protect against thrust as well as radial loads. Made by **J. G. Jergens Co.**, Dept. NED, 11106 Avon Ave., Cleveland 5, O.

For more details circle **NED-87 D3** on enclosed inquiry slip

COSTLY WORK BENCHES NEED NOT BE A "NECESSARY EVIL"
Investigate
INDUSTRIAL LAMINATED WOOD TOP **BENCHES** . . . still your best bench buy!

Nowhere else can you find a bench of such outstanding quality — with so many exclusive patented features — *for so low a price!* No other bench is so right for you for so many working needs. INDUSTRIAL BENCHES *last longer*...because they *stand up better*...made STRONG to begin with.

30 sizes and styles. *Send for complete catalog and prices.*

No. 1909

RIGID.... LOWER PRICED

24" wide, 5 foot long, 33 inches high.

Full laminated wood top made of selected hard maple on edge, 1¾" thick. All sections joined true and glued. Reinforced with concealed bolts. Tops finished, sanded and shellacked. Absolutely no bolts or screws protrude or show above top surface of bench.

IMMEDIATE DELIVERY. ORDER TODAY!

$58.85 K.D.F. F.O.B. NEW BRITAIN
Drawer, extra $8.25

INDUSTRIAL BENCH & EQUIPMENT MFG. CO., INC.
91 South Street • New Britain, Conn.

Benches — Steel, Maple Top, Welding • Machine Stands, Work Stands, Bench Legs, Tote Boxes.

For more details circle **NED-88 D3** on enclosed inquiry slip

HIGH STRENGTH ADHESIVE
suited to many hard-to-bond jobs

Bonding of aluminum to aluminum and joining of other hard-to-bond metals is possible with A-6 adhesive which requires only contact pressure for joining and cures at room temperature. It will also bond such other rigid materials as wood, plastics, glass and hard rubber to themselves and to each other. Curing takes from 1 to 36 hours, depending upon temperature applied. Shear tests often exceed 3000 psi at room temperature and 2500 psi at elevated temperatures. Adhesive does not shrink, swell or creep and is available in pints, quarts, gallons and 5-gallon quantities. Trial test kit, including activators, is $1.00 in U. S. or Canada. Made by **Armstrong Products Co.**, P. O. Box 1-N Warsaw, Ind. *Advt.*

For more details circle **NED-89 D3** on enclosed inquiry slip

HOMER PERMANENT non-electric MAGNETIC DRUMS and DUCTS for AUTOMATIC REMOVAL of TRAMP METALS

Pat. Pending

HOMER Magnetic Ducts for the removal of tramp iron from Air or Gravity conveyed Grains, Textile and Chemical materials, etc. These units are used with almost any type of processing machinery.

HOMER Magnetic Drums for removal of tramp iron from fine or pulverized dry products, as, Foods, Chemicals, Plastics, Paint Pigments, etc. These units can be used with chutes, hoppers, screw or belt conveying machinery.

Send for detailed information.

Homer **The HOMER MANUFACTURING CO., Inc.**
Dept. 1-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

For more details circle **NED-90 D3** on enclosed inquiry slip

PERFECT PERFORMANCE- *FASTER!*

Clauss Electronics Snips Spring To The Job!
Developed in close cooperation with electronics workers ...Sharp points for accurate, minute work.

Clauss
FINE CUTLERY SINCE 1877

HOT HAMMER-FORGED
ELECTRONICS SCISSORS & SNIPS

Set New Cost and Time Cutting Records!

Clauss Electronics Scissors Cut Filament Quickly, With Watchmaker Precision
Available with blades plain . . . or with one blade finely saw-toothed to prevent slippage.

There are Clauss Shears, Scissors and Snips for every industrial cutting need . . . Tough cutlery steel Shears that last longer and hold their adjustment, without becoming loose and unmanageable . . . Tools designed properly for each job, with correct balance, and comfort in the hand.

Write or Wire for information

THE HENKEL-CLAUSS CO.
FREMONT, OHIO
NEW YORK OFFICE
1107 BROADWAY

For more details circle **NED-91 D3** on enclosed inquiry slip

Prescription for protection

When you select Ply products to protect your employees from the hazards of industrial processing, you have the satisfaction of knowing you have purchased the very best!

For over 20 years Ply products have been used and proven successful by the nation's leading industrial plants. If you're not already using Ply products, it's time to get the facts now!

Write today for literature and samples

PLY-GARB clothing is now available in plastic woven materials that assure complete protection, long wear and comfort.

PLY-GLOVS are plastic coated and will protect your workers hands from water, acid, caustics, petroleum — and all chemicals except M.E.K. solvents.

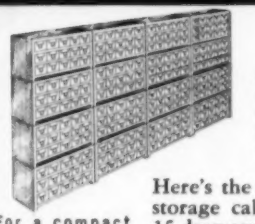
THE MILBURN COMPANY
DETROIT 7, MICHIGAN

For more details circle NED-92 D3 on enclosed inquiry slip

LARGER 2-INCH DEEP DRAWERS

FOR ALL SMALL PARTS STORAGE

"E-Z-C" PLASTIC DRAWER STORAGE CABINETS



TRADE PRICE $7.47

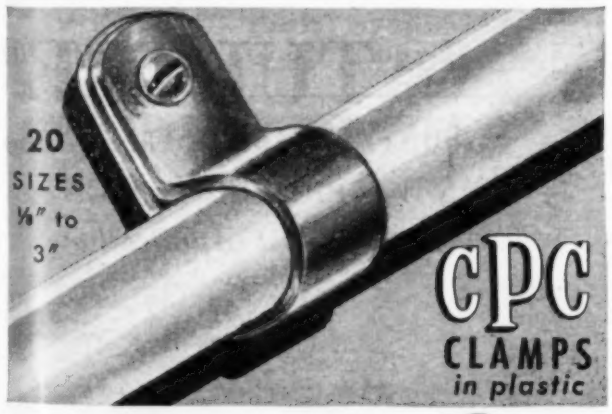
- Removable Dividers in Each Drawer
- Electric Weld All Steel Cabinet
- Name Plate Slot in Each Drawer
- Safety Catch Prevents Any Spilling
- Name Plate on Each Drawer

Here's the newest, low-cost multi-purpose storage cabinet — strong enough to hold 15 drawers full of lead, yet minimum light in weight. The see-thru clear plastic drawers (¾" deeper than average size) show at a glance the parts or equipment they are storing. Increased convenience from the deeper drawers—15 drawers hold any and all parts, office supplies, etc.—for use in plant, office or home.

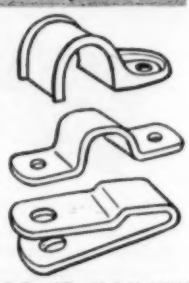
For a compact storage room, stock E-Z-C Cabinets up, side by side, or back to back. Send for descriptive literature.

J. G. STILL EQUIPMENT COMPANY
1017 E. Ohio St. Pittsburgh 12, Pa.

For more details circle NED-93 D3 on enclosed inquiry slip



TOUGH . . . Enduring



Safer, Simpler, faster, more secure. For cables, thin-wall tubing, wires, conduits, light hose. *No shorts! No tearing! No corrosion!* Wide variety shapes, styles, sizes and materials. Write today:

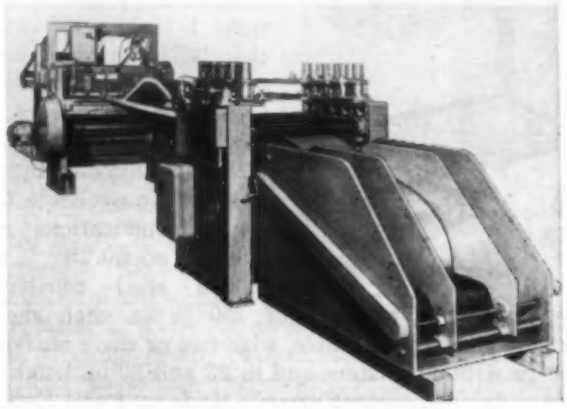
2818 W. NORTH AVE. • CHICAGO 47, ILLINOIS

COMMERCIAL PLASTICS CO.

For more details circle NED-94 D3 on enclosed inquiry slip

AUTOMATIC SHEAR LINE handles sheet 6 to 60 in. wide

Handling any flat material such as steel or aluminum up to 13 gage, this one-man operated shear line decoils, levels, shears and stacks automatically. It



handles widths from 6 to 60 in., and can also be set to shear lengths from 6 to 60 in., with a plus-minus variation of only 1/64-in. One adjustment is required to change lengths. Operating speeds are up to 150 linear fpm, depending upon length to be cut. Made by **Union Tool Corp.**, 222 E. Market St., Warsaw 30, Ind.

For more details circle NED-95 D3 on enclosed inquiry slip

HIGH-LIFT FORK TRUCKS electric powered models include capacities from 1000 to 4000 lb

Designated the Standard Skylift CF line, series of electric fork lift trucks includes models with capacities of 1000 to 4000 lb. Features are class H silicone insulated motors, duolift rams with leakage return, high lifting speed, hydraulic safety fuses and accessibility for maintenance. Upright channels are heavy steel rolled sections, and interchangeable carriage and upright rollers are mounted on sealed ball bearings. Side thrust rollers on fork carriage are widely spaced and adjustable for wear.

Line includes models with rated capacities of 1000 lb with 48-in. load length; 1500 lb, 48-in. load; 2000 lb, 48-in. load; 3000 lb, 48-in. load; and 4000 lb, 30-in. load. All models are offered with either duolift rams which provide full free lift or monolift which gives 19¼-in. free lift before overall height increases. All models have full telescopic lift height of 132 in. Made by **Automatic Transportation Co.**, 149 W. 87th St., Chicago 20, Ill.

For more details circle NED-96 D3 on enclosed inquiry slip

CUTTERS

that give you more clean cuts per dollar

Every cutter in the broad Brown & Sharpe line is carefully designed and manufactured to lower your *real* cutter cost . . . give you more smooth, clean cuts per dollar invested. Complete selection of types and sizes to improve milling efficiency on any job. Write for illustrated Catalog. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

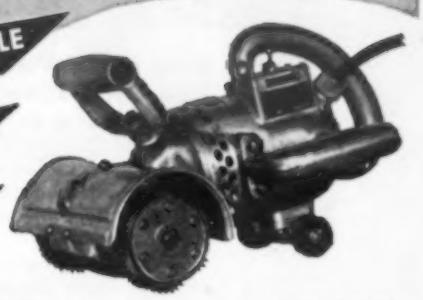
BUY THROUGH YOUR LOCAL DISTRIBUTOR

Brown & Sharpe

For more details circle NED-97 D3 on enclosed inquiry slip

ZIP OFF

SCALE
RUST
PAINT



with **AURAND** CLEANING TOOLS

AURAND rotary chipping action quickly, easily, thoroughly removes scale, paint, rust, and other accumulation from any hard surface. Renewable cutter heads and fool-proof cutting depth adjustment allow the unskilled operator to produce perfectly clean surfaces. Available in electric or pneumatic models. Write today for further information on cleaning your iron, steel, brick, concrete, and other hard surfaces.

Get the time and money-saving facts

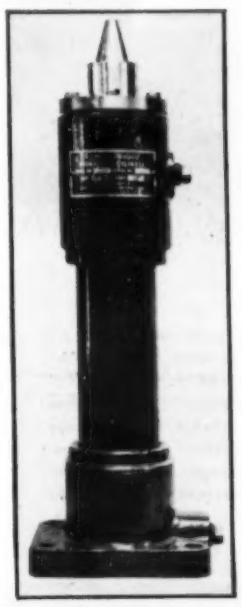
WRITE TODAY TO DEPT. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle NED-98 D3 on enclosed inquiry slip

Highly Simplified

SEALDRAULIC HYDRAULIC OIL CYLINDERS



★ *A Trouble Free Cylinder!*
★ *Every Refinement*
★ *Simplification Dictated by Field Experience*

"O" Ring gaskets seal with pressure • Can't leak • All types of mountings • 1" to 8" bore • Any practical length • No assembly bolts • Standard and heavy duty piston rods • Screwed on castings allow universal piping positions • Cushioned on both ends

WE URGE COMPARISON

Some Territories Open For Sales Representatives

PRECISION MACHINING, METICULOUS CARE IN ASSEMBLY AND TESTING GUARANTEE YEARS OF TROUBLE FREE OPERATION

For Quotation and Quick Delivery Send Requirements to

FISHBURNE MACHINE CO.
P. O. BOX 6006 ASHEVILLE, NORTH CAROLINA

For more details circle NED-99 D3 on enclosed inquiry slip

Portable 100-TON SOLID TIRE RIMMING PRESS

★ Works on a complete range of industrial wheel sizes.

★ Small and rugged; portable; may be mounted on a truck.

★ May be powered by a 3 HP electric motor, or a 6.4 gasoline engine.

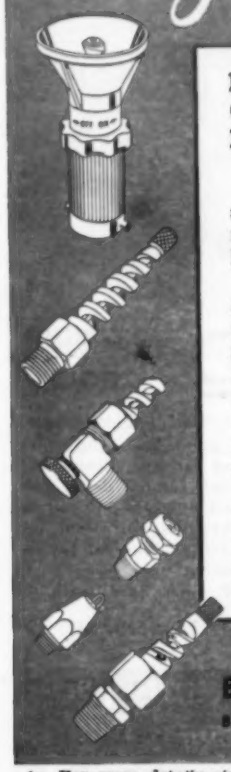
★ Having a 100-ton capacity, it can handle the most obstinate cases.

The Industrial Tire Rimming Press is intended primarily for pressing on and off tires from solid industrial wheels of the type which have rubber cured on the steel rims, or a similar application. It has a maximum capacity of 100 tons, and a maximum stroke of 14 inches. Crane and hand winch attachments for handling tires and wheels can be furnished when required.

THE AKRON STANDARD MOLD CO.
Manufacturers of Rubber Molds & Rubber Machinery, AKRON 5, OHIO

For more details circle NED-100 D3 on enclosed inquiry slip

BETE Fog NOZZLES
for Industry, Agriculture, Fire Protection



New Spiral Principle Generates Fine Fog at Low Pressures!

Many spray problems are now being solved through the use of the new and radically different line of Bete Fog Nozzles.

Bete Nozzles operate on a patented spiral principle of fog generation — they shear a continuous spiral sheet from a single jet to produce fine fog at low pressures. These unique nozzles are non-clogging, produce a more uniform drop size, and are so highly efficient that operating pressures can often be reduced.

The Bete line includes wide angle, hollow cone, full cone and flat spray nozzles for all purposes — in flow rates from ½ gallon per hour to 500 gallons per minute.

For Full Information and Catalog write:
BETE FOG NOZZLE INC.
85 Pierce Street, Greenfield, Massachusetts

For more details circle NED-101 D3 on enclosed inquiry slip

HOW MUCH VIBRATION WILL YOUR PRODUCT STAND?

THE Model 10VA, shown, is one of eight models of All American Vibration Fatigue Testing Machines. The "10VA" produces vibration vertically in simple harmonic motion — from 10 to 55 cycles per second on automatic control and from 10 to 60 c.p.s. on manual control. Table load capacity 10 lbs. at 10g. Has 50% overload factor. Tests components, assemblies, products — exposes danger points — forestalls failures in the field. Simple to operate. Essential for today's inspection, testing, research. Send for Bulletin 551.

Manufacturers of All American Precision Die Filing Machines.

ALL AMERICAN Tool & Manufacturing Co.
8013 Lawndale Ave., Skokie, Ill.

For more details circle NED-102 D3 on enclosed inquiry slip

"FLATWEAVE" SLINGS

Cut materials handling costs with Roebling "Flatweaves"

"FLATWEAVE" SLINGS are tops! Their broad, flat-bearing surface prolongs sling life. "Flatweaves" speed up operations because they're extra flexible, kink-resistant, and easy to handle.

Write for free copy of the "Roebling Sling Data Book." It gives the whole story about "Flatweaves", plus money-saving facts on the full Roebling line... a sling for top efficiency and economy on every job. John A. Roebling's Sons Corp., Trenton 2, New Jersey.

A subsidiary of The Colorado Fuel and Iron Corporation

ROEBLING

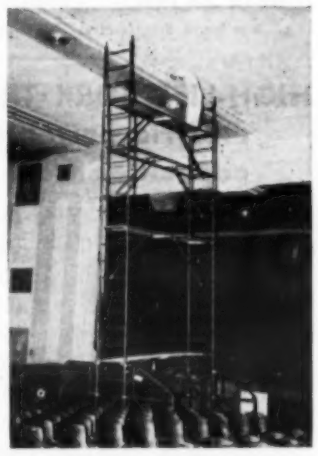
For more details circle NED-103 D3 on enclosed inquiry slip

STEEL SHOP TABLES
furnished with or without casters

Handling of parts at bench or machine tools during assembly, production or inspection operations is facilitated with this MIJ Grizzly steel service table. Shop boxes are held at right height for parts handling with minimum of fatigue. Casters are available for use in applications requiring portability. Of welded steel construction, table has capacity of 250 lb on each shelf. Eight models are available, with two or three shelves, with or without casters and in 23 and 30-in. heights. All are finished cabinet green. Made by **Pucel Enterprises, Inc.**, 3746-A Kelley Ave., Cleveland 14, O.

For more details circle NED-104 D3 on enclosed inquiry slip

LIGHTWEIGHT SCAFFOLDING
uses universal locking clamp



Practically all bolting has been eliminated in Ladscaf light weight scaffolding by universal clamps which positively lock horizontal panels and braces to upright members. Clamp hooks over tubular member and locks in place easily. Use of clamp also simplifies disassembly. Light weight ladder type panels of welded tubular steel are used, with ladder rungs spaced at 1 ft intervals. Working platforms are placed at efficient levels. Scaffolding is versatile in construction and can be assembled as required to provide safe installations on stairways and sloping floors. Casters permit rolling of assembled scaffold to new areas. Stabilizers swing back for passage through narrow aisles and doorways. Made by **Universal Mfg. Corp.**, E. New Castle St., Zelienople, Pa.

For more details circle NED-105 D3 on enclosed inquiry slip

Alloy Steel Pipe & Tubing

Babcock & Wilcox Co., Tubular Products Div.— Complete selection and engineering data on line of Croloy steel pipe and tubing for elevated temperature and pressure applications are contained in 6-page illustrated folder. This technical data card gives information on mechanical and physical properties, creep strength, hot and cold bending, welding procedures, heat treatment and working pressures.

For more details circle NED-106 D3 on enclosed inquiry slip

If it has a hole through it YOU CAN HANDLE IT FASTER *with the* SABIN Coil TRUCK

A handy truck and a real labor saver in handling Wire Coils, Strip Coils, Wheels, Tires, Lathe Chucks or Face Plates— in fact anything with a hole through it.

You simply run truck up to article, passing arm through hole—then an easy pull back on handle picks up load. Follower wheel minimizes trucking effort.

We also manufacture many other types of One Man Trucks. *WRITE FOR BULLETIN NO. 48*, showing complete line.

THE SABIN MACHINE CO.
6536 Carnegie Ave.
CLEVELAND 3, OHIO

For more details circle NED-107 D3 on enclosed inquiry slip

Modern way to save money . . . Farquhar medium duty PACKAGE CONVEYOR

Cuts COSTS Boosts PROFITS

IF you're looking for an easier, faster, cheaper way to move bags, bales, boxes, cartons and bundles up to 75 pounds, get this Farquhar Model 436 Package Conveyor on the job and watch your handling costs hit rock bottom!

The Farquhar Model 436 is especially designed for all types of portable or semipermanent materials handling installations.

Heavy, two-ply rubber covered belt is 12" wide, carries units up to 75 pounds at standard speed of 78 feet per minute. Belt is supplied with or without cleats. Standard center support provides great stability, may be attached to floor or hung from ceiling. Minimum length 14 ft., maximum 32 ft.

OLIVER Farquhar CONVEYORS

FREE! "Owners Report"— a booklet of case histories describing money-saving Farquhar conveyor installations. Write: THE OLIVER CORPORATION, A. B. FARQUHAR DIVISION Conveyor Dept. A-04 York, Pa.

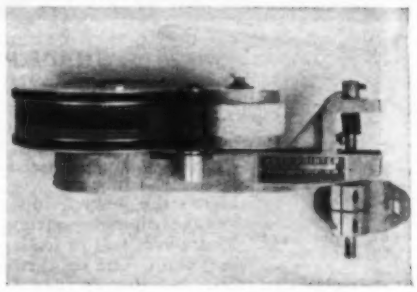
POWER-BELT & GRAVITY CONVEYORS

For more details circle NED-108 D3 on enclosed inquiry slip

CODE, DATE and MARK AUTOMATICALLY on your *CONVEYOR LINE* with the "WHIPPET" MARKER

The "Whippet" marks filled bags, cartons, boxes, rolls, cans etc. with quickly interchangeable rubber type. Inking is through a felt roller that has self-contained reservoir. No installation problems— readily adaptable to your present conveyor system.

The "Whippet" Marker is just one of Industrial's coding and marking machines designed for more efficient marking and movement of materials on production lines. Let us help you with your problems—write today. "FREE" Catalog upon Request.



THE INDUSTRIAL MARKING EQUIPMENT COMPANY, INC.
Machines available for munitions marking
454 Baltic Street, Brooklyn 17, N.Y. Dept. N.E.D.
Phone MAin 4-2601

For more details circle NED-109 D3 on enclosed inquiry slip

TURTLE®
CONVEYOR BELT FASTENERS
IMPROVED DESIGN
For Fast Application

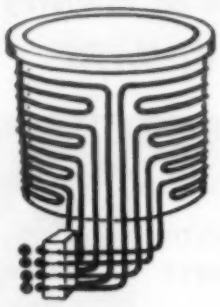
JUST A HAMMER TO APPLY IT

- It's a *drive-on* fastener for making quick, tight joints and repairs on conveyor belts.
- New and improved design brings edges of belt together —no gaping openings.
- Only a hammer is required to apply.
- Made of Steel, Monel, Stainless, Everdur.
- One size only No. 16—for repairing belts 3/8" to 9/16" thick—for joining belts 7/16" to 9/16" thick.

Order from your Supply House. Ask for Bulletin T-600
FLEXIBLE STEEL LACING CO.
4610 Lexington St., Chicago 44, Ill.

For more details circle NED-110 D3 on enclosed inquiry slip

Here's why the STA-WARM METHOD Melts Compounds so Efficiently

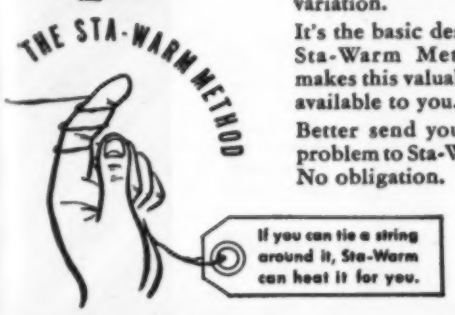


Multiple circuits, controlled by sensitive bimetallic relays, automatically turn heat on ... or off ... as the compound level rises or falls in the tank.

You specify the "ideal" temperature for melting the particular compound your plant uses and Sta-Warm will provide the tank to hold to within a 1°F.(±) variation.

It's the basic design in the Sta-Warm Method that makes this valuable feature available to you.

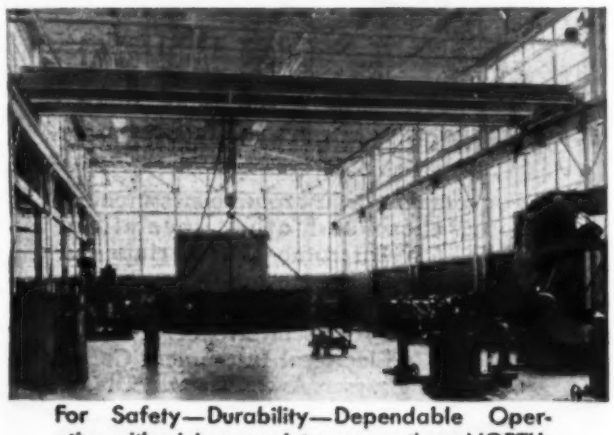
Better send your current problem to Sta-Warm now. No obligation.



Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle NED-111 D3 on enclosed inquiry slip

NORTHERN HI-LIFT OVERHEAD CRANES



For Safety—Durability—Dependable Operation with minimum maintenance—these NORTHERN HI-LIFT CRANES are especially developed for low headroom operation and floor control. Let us send you further details in

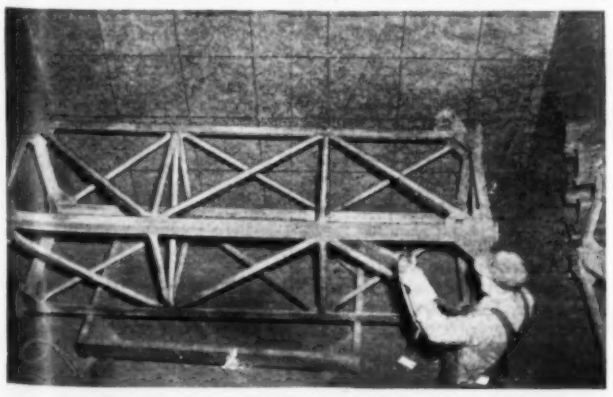
BULLETIN HL-115-R

NORTHERN ENGINEERING WORKS, 2615 Atwater St., Detroit 7, Mich.

NORTHERN CRANES AND HOISTS

For more details circle NED-112 D3 on enclosed inquiry slip

WHO SAID PAINT OVERSPRAY REMOVAL WAS A PROBLEM?



This R-P Paint Arrestor Installation is Economical, Effective. Requires a Minimum of Floor Space

A wall of R-P Paint Arrestors and a blower solved the manufacturer's paint overspray removal problem in painting sections of structural steel in the installation above. Versatile R-P Paint Arrestors can be the economical solution for your plant, too.

WRITE FOR FREE BOOKLET

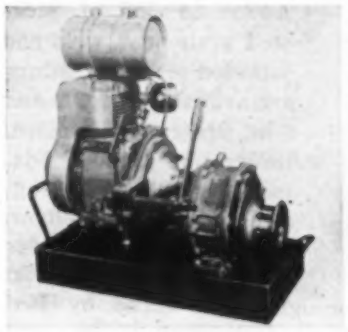
Helpful, informative suggestions to solve your paint spray booth problems. Write today.

RESEARCH PRODUCTS CORPORATION
Dept. 32, Madison 10, Wisconsin

RP . . . PRODUCTS OF RESEARCH

For more details circle NED-113 D3 on enclosed inquiry slip

PORTABLE WINCH is electric or gasoline powered



Standard models of Gypsiwinch light weight, portable winch with capstan type drum are equipped with either electric or gasoline powered units ranging from ¾ to 7½ hp. Two handles facilitate moving the units, while its all-steel base can be secured by ½-in. lag bolts. Capstan permits accurate spotting of the load, allowing the operator to "skid" the line by slackening off pressure while the capstan is rotating. Winch is also available in combination with a cable drum. Power units are instantly reversible, gears are completely enclosed and motor, drum and pinion shafts are ball bearing mounted. Made by **St. Anthony Machine Products Co.**, Dept. KP, 2424 E. Franklin Ave., Minneapolis 6, Minn.

For more details circle NED-114 D3 on enclosed inquiry slip

HOSE LINE CONNECTOR couples or uncouples instantly

Instant connection and disconnection of fluid carrying lines by means of simple push-pull action is possible with this Slide Seal coupling. Light weight,

compact and low in cost, this hose line coupler consists for two-piece die cast aluminum assemblies with rubber O-rings. Spring-actuated locking device holds each half in coupled position to permit flow of fluids. Pressing the lock lever separates the coupling halves and starts the disconnecting action which is completed by a light pull. When disconnected, each half of coupling forms a positive seal. Couplings can be used with range of fluids such as hydraulic fluid, water, oil, antifreeze solutions, diesel fuel and gasoline. Made by **Aeroquip Corp.**, 303 S. East Ave., Jackson, Mich.

For more details circle NED-115 D3 on enclosed inquiry slip

V-Belt Ventilating Units

Clarage Fan Co.—28-page catalog 515 features tabulated ratings on complete line of V-belt packaged ventilating units for universal application. These Ready Units are made in sizes for moving 100 to 12,000 cfm air at low static pressures. Booklet also covers features, advantages of v-belt drive and construction highlights.

For more details circle NED-116 D3 on enclosed inquiry slip

For more details circle NED-117 D3 on enclosed inquiry slip

Chicago MOUNTED Wheels

...now even better with **79E BOND**

Buy Chicago Mounted Wheels—bonded with 79E Bond—and you'll never use any other!

79E—a tough new bond exclusive with Chicago Wheel—is the sensation of the industry . . . it does a BETTER grinding, burring, and finishing job FASTER. A size and shape for every use. Deliveries are excellent—Order today.

CHICAGO WHEEL & Mfg. Co.
Dept. NED • 1101 West Monroe Street, Chicago 7

For more details circle NED-118 D3 on enclosed inquiry slip

EXCELSIOR CO. staples bicycle cartons.. saves $11,000 a year

$36 a day . . $11,000 a year! That's the saving chalked up by an International Carton-Stapling Machine at Excelsior Mfg. Co., Michigan City, Indiana, nationally known manufacturer of bicycles.

Here's Excelsior's "before-and-after" story: "Formerly our packaging department had 7 men. Now we use only 4. Per-man closure with stapling machine is 19, compared to 11 in same period using glue. Cartons look better because there is no glue spillage."

International Carton-Stapling Machines will save you up to 50% on packaging costs . . write for details.

INTERNATIONAL STAPLING MACHINES
INTERNATIONAL STAPLE & MACHINE COMPANY
802 East Herrin Street, Herrin, Illinois

For more details circle NED-119 D3 on enclosed inquiry slip

There are lots of ways to Humidify your Plant

. . . but these companies use Armstrong Steam Humidifiers

• ARMSTRONG HUMIDIFIERS introduce clean dry steam directly into the atmosphere—automatically increase humidity to keep it within 1% or 2% of the desired level. They are easily connected to existing steam and electrical or air systems, cost from a few pennies to perhaps $1.00 per day to operate depending on size of unit. A unit capable of supplying 60 lbs. of moisture per hour lists at only $182.25 complete with control.

Why delay? SEND FOR BULLETIN 1774 giving complete details and prices.

Partial List of Users:
Remington Arms Corp.
Dunlop Tire & Rubber Corp.
General Cable Co.
Atlas Powder Co.
General Electric Co.
Lord Manufacturing Co.
U. S. Rubber Co.
Morton Salt Co.
Brown Shoe Co.
Albany Felt Co.
Rway Furniture Co.
Baring Press

ARMSTRONG MACHINE WORKS
819 Maple Street, Three Rivers, Michigan

For more details circle NED-120 D3 on enclosed inquiry slip

FOR BETTER PRINTS...

BRUTEX

PENCIL TRACING CLOTH

1. SUPER-VELVET MATTE SURFACE . . . white or blue—exactly right for pencils of even the harder grades.
2. UNIFORM TRANSLUCENCY . . . makes clean, sharp prints.
3. ERASES EASILY . . . no "ghosting". Surface is unaffected by even repeated erasures.
4. MOISTURE-RESISTANT . . . no "spots" from dampness or perspiration.
5. PERMANENT . . . won't discolor, become brittle, or lose translucency.

Prove it on a FREE SAMPLE! Write for free sample and booklet. CHARLES BRUNING COMPANY, INC., Dept. S43, 4700 Montrose Ave., Chicago 41, Ill. A-3-1

BRUNING

Everything for the Engineer and Draftsman

For more details circle NED-121 D3 on enclosed inquiry slip

DOWNS SAFETY GRABS

...GRIP ANYTHING!

FOR CRANES AND HOISTS...

Material lifting equipment will do more work—faster, easier—when you have the proper "grabs" for every type of load. No matter what your hoists are handling—pipe, rails, drums, plate or structural steel, stone, timber, boxes or odd-shaped objects of any description—there's a DOWNS *Safety* Grab that will enable you to do it faster, easier *and* safer. Learn new short cuts to greater efficiency for YOUR plant with DOWNS' *complete line* of *Safety* hoist grabs!

Write for Free Illustrated Catalog 200 Today!

DOWNS CRANE & HOIST CO.

MECHANICAL ENGINEERS

540 W. VERNON AVENUE • LOS ANGELES 37, CALIF.

For more details circle NED-122 D3 on enclosed inquiry slip

E. F. HOUGHTON & CO., 303 W. Lehigh Ave., Philadelphia 33, Pa.

Please show me how to solve our fuel oil efficiency problems.

NAME _____

FIRM _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

For more details circle NED-123 D3 on enclosed inquiry slip

JACKETED PIPE & FITTINGS

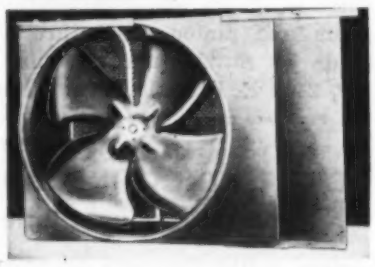
welded line includes 2 to 6-in. sizes

Added to line of jacketed equipment, weld end jacketed pipe and fittings are available in 2, 3, 4 and 6-in. sizes as standard. Illustration shows 4-in. jacketed 90-degree long-radius weld end elbow. Units provide means for keeping fluids hot or cold during transmission through line. Made by **Red Jacket Co.**, 235 Fourth Ave., Pittsburgh 22, Pa.

For more details circle NED-124 D3 on enclosed inquiry slip

VENTILATING WINDOW FAN

20-in. unit delivers 3100 cfm



Flip of combination switch on this Airgale 20-in. reversible ventilating fan reverses motor for blowing operation. Four-bladed unit has high speed air movement of 3100 cfm and low speed movement of 2100 cfm. Shielded motor is 1/6-hp and is rubber mounted. Two sliding brackets, one on each side of fan housing at the top facilitate installation. An expander fits unit into windows up to 32 in. wide. Heavy gage reinforced steel cabinet has rubber mounts. Stamped grill protects rear of unit. Front grille is optional along with outlet shutters and automatic timer. Made by **Air Controls, Inc.**, 2300 Superior Ave., Cleveland 14, O.

For more details circle NED-125 D3 on enclosed inquiry slip

SAMPLE COOLER

for steam or boiler water checking

Consisting of Cupro nickel concentric - coiled tubing, stainless steel connecting blocks, industrial type dial thermometer and bracket for wall mounting, model SC-7A-B-W sample cooling coil allows checking of high pressure steam or boiler water by means of an electrolytic conductivity cell. Sample to be tested is reduced in temperature and pressure to measuring range so that standard test equipment can be used. Made by **Industrial Instruments, Inc.**, 89 Commerce Rd., Cedar Grove, N. J.

For more details circle NED-126 D3 on enclosed inquiry slip

For Shear Cut Thru-Feed Disc Grinding

GARDNER abrasive discs

GARDNER MACHINE COMPANY

460 Gardner St., Beloit, Wisconsin

For more details circle NED-127 D3 on enclosed inquiry slip

BLAW-KNOX STEEL GRATING in the Front Rank of Industry ON ALL 5 COUNTS

OPEN SPACE • STRENGTH
LONG LIFE • CLEANNESS
SAFETY

Blaw-Knox Steel Grating is electroforged into rigid, one-piece panels, using twisted cross bars for firm footing. Bring your open steel flooring problems to Blaw-Knox for expert help. Bulletin 2365 sent on request.

BLAW-KNOX EQUIPMENT DIVISION OF BLAW-KNOX COMPANY
2068 Farmers Bank Bldg.
Pittsburgh 22, Pa.

BLAW-KNOX Electroforged STEEL GRATING

For more details circle NED-128 D3 on enclosed inquiry slip

Specialized and Multi-purpose

INSTRUMENTS

for RESEARCH·PRODUCTION·MAINTENANCE

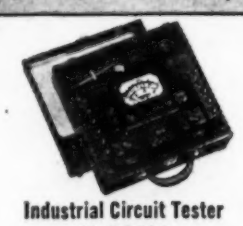
For complex, or just routine measurement jobs, these and other specialized WESTON Instruments save time and assure dependable measurements. For information on the complete line, see your local Weston representative, or write . . . WESTON Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N. J.

Model 622
Ultra-Sensitive Instruments

Portable d-c and a-c thermo instruments for precision measurement of potentials and minute currents in electronics or laboratory research.

Model 901
Portable Test Instruments

Available in d-c, Model 901—and a-c, Model 904, single and multiple ranges of wide coverage. Excellent scale readability and shielding. Accuracy within ½ of 1%.



Industrial Circuit Tester
Model 785

A multi-range, multi-purpose, ultra-sensitive analyzer, for laboratory and industrial checking of electrical and electronic circuits. Has 28 practical scale ranges; measures d-c and a-c voltage, d-c and a-c current, and resistance. Accessories available to extend ranges. Compact and portable; furnished in either oak or steel case.

High Frequency Electronic Analyzer—Model 769

A three-in-one instrument providing a self-contained Volt-Ohm-Milliammeter, a high impedance electronic D-C Volt-Ohmmeter, and a probe type Vacuum Tube Voltmeter for use to 300 megacycles. Exceptionally stable and accurate. Has specially designed extremely small RF and D-C probes.

WESTON Instruments

For more details circle NED-129 D3 on enclosed inquiry slip

SURETY'S SURESEAL INDUSTRIAL GLOVES

TURN-CUFF OR STANDARD GAUNTLET

- 10 Times higher abrasion resistance in standard abrasion tests.
- 4 Times higher snag resistance in standard puncture tests.
- Turn Cuff style with no-drip feature and 2-inch longer gauntlet.
- Surety's Sureseal synthetic rubber gives you much higher resistance to industrial chemicals than either natural rubber or standard synthetics.

Phone your jobber or write direct.

THE SURETY RUBBER CO. CARROLLTON, OHIO

DEPT. N. CARROLLTON, OHIO

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MAINTENANCE TIPS FOR YOU

in every issue of the

"NEOPRENE NOTEBOOK"

New products made of neoprene, Du Pont's tough chemical rubber.

On-the-job reports proving neoprene's superiority in the field.

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MAIL READER-SERVICE CARD FOR YOUR FREE SUBSCRIPTION

NEOPRENE

The rubber made by Du Pont since 1932

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To save money, let 'em roll on the NEW MHS WHEELVEYOR

Here's the inexpensive, rugged, practical, *money-saving* way to move smooth, full-bottomed commodities in plant, warehouse and store, and to and from carriers. Save time, money and manpower with new MHS Wheelveyor!

Many great features for long service, easy operation, extreme flexibility and economy. Get your copy of Wheelveyor bulletin and plan your own Wheelveyor installation. Write today!

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4615 Nancy Ave. • Detroit 12, Michigan Offices in Principal Cities

In Canada: Canadian Mechanical Handling Systems, Ltd.

▲ For more details circle NED-132 D3 on enclosed inquiry slip ▲

CHAIN SAW
cuts within ¼-in. of ground

Fast, efficient wood cutting within ¼-in. of the ground is possible with model 30 chain saw powered by two-cycle air-cooled gasoline engine. Saw features antifriction ball and needle bearings, die cast aluminum cylinder, aluminum alloy piston, fully automatic clutch and Oregon chipper type chain. It can have 16 or 20-in. straight bar and weighs 25 lb, less chain and cutter bar. Made by **Lombard Governor Corp.**, 150 Main St., Ashland, Mass.

▲ For more details circle NED-133 D3 on enclosed inquiry slip ▲

PERMANENT MAGNET ROLLS
handle pipe, rod and bar stock

Handling of wide range of long straight ferrous stock is facilitated with line of non-electric concave and straight magnetic rolls. They have high surface strength magnets to convey such products as pipe, rods, angles, flat sheets, plates and bars. Life of permanent magnets is equal to that of rolls. Concave units handle pipe and bar type stocks and center them, while flat rolls are straight faced. Made by **Dings Magnetic Separator Co.**, 4758 W. Electric Ave., Milwaukee 46, Wis.

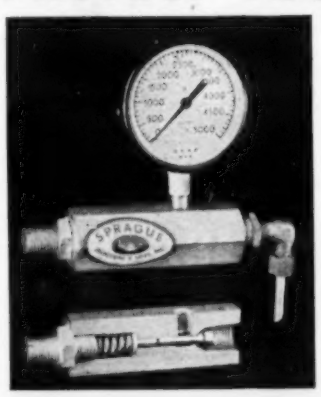
▲ For more details circle NED-134 D3 on enclosed inquiry slip ▲

AIR OPERATED WRENCHES
tools are of impact type

Used for driving bolts, studs, nuts, screws and almost any threaded fasteners in assembly and subassembly operations, two additional sizes have been added to line of pneumatic impact wrenches. The M960 tool weighs less than 10 lb, has free run-down speed of 5000 rpm and is equipped with ⅝-in. square drive for sockets and attachments. Model M970 weighs 11 lb, has free run-down speed of 4500 rpm and ¾-in. standard drive. Both tools operate on 80 to 100 psi air pressure. Built-in air control regulator provides four settings for various torque requirements. Automatic lubricator and oil reservoir keeps tool lubricated. **Master Pneumatic Tool Co.**, Peneman Rd., Orwell, O.

▲ For more details circle NED-135 D3 on enclosed inquiry slip ▲

PROTECT YOUR GAGES!



New Shut Off Valve automatically cuts out gage from system when hydraulic or pneumatic pressure goes beyond its operating limit. Automatically opens when pressure is again within operating range of gage. (Cut-in point approx. 80% of set cut-out point.) Available for low pressures— 30, 60, 100, 200 and 300 PSI. and high pressures—500, 1000, 1500, 2000, 2500, 3000 and 5000 PSI. Sprague Gage Shut Offs installed in a hydraulic system with multiple gages of various ranges, save valuable man hours. They eliminate the necessity of the operator opening and closing manually operated shut off valves for the various gages in the system. Supplied with standard pipe thread connections but can also be furnished with AN adaptors for aircraft fittings. Connection to the system is made at the end of shut off, ½" pipe thread. Connection to gage is made on the side of shut off, ¼" pipe thread. Overall length 5½ inches. Body is 1½ inch hexagon stock. Other models with bronze or stainless steel bodies available for water service. Finest construction. Individually tested and fully guaranteed. When ordering, specify capacities desired. Write today for bulletin.

SPRAGUE ENGINEERING & SALES CORP.

1144 West 135th St., Gardena, Calif.

Designers and Manufacturers of Precision Aircraft and Industrial Test Equipment.

▲ For more details circle NED-136 D3 on enclosed inquiry slip ▲

Bolts . . . Nuts . . . Rivets . . . Screws—have provided their users with almost 100 years of the same dependable uniformity of quality and accuracy of finish that has made CLARK Products famous for their greater security and ease of application.

For Greater Security... Fasten Fast with Clark Fasteners

CLARK BROS BOLT CO.

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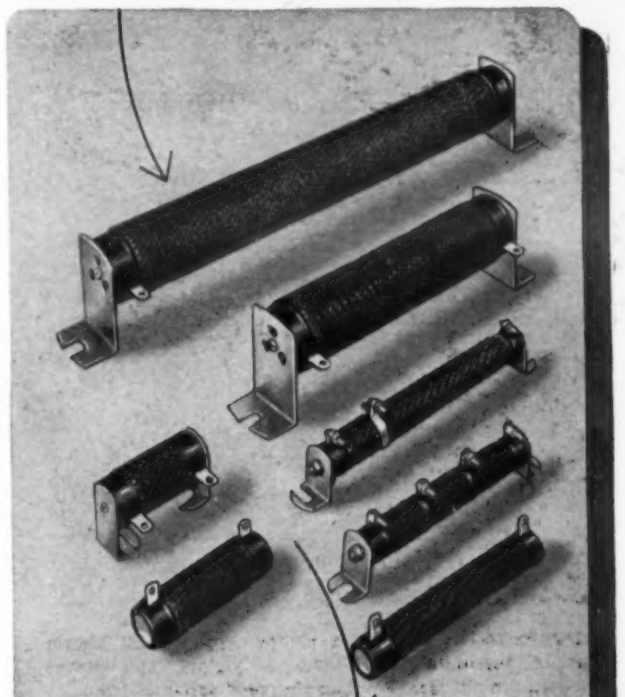
Export Dept., Suite 513
25 Beaver St., N.Y. 4, N.Y.
Whitehall 4-4392

6-M-2a

BOLTS • NUTS • RIVETS • SCREWS

▲ For more details circle NED-137 D3 on enclosed inquiry slip ▲



OHMITE®

CORRIB® corrugated vitreous enameled RESISTORS

for High-Current Low-Resistance Applications

Here's a line of specialized resistors for your high-current, low-resistance applications. Rugged, dependable CORRIB resistors are designed for "cooling-fin" action... with a corrugated ribbon of resistance-alloy metal which is space-wound edgewise around a ceramic tube. Vitreous enamel holds the ribbon securely in place.

CORRIB resistors are available in both fixed and "Dividohm" adjustable types made to your requirements. Core sizes range from 9/16" by 4" to 2-1/2" by 20", with ratings from 90 to 1500 watts.

OHMITE MFG. CO., 4842 Flournoy St., Chicago 44, Ill.

Write on Company Letterhead for Catalog and Engineering Manual 40

OHMITE® RHEOSTATS RESISTORS TAP SWITCHES

▲ For more details circle NED-138 D3 on enclosed inquiry slip ▲

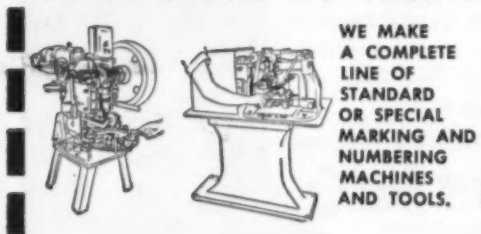
JOB MARKING

OF YOUR { PRECISION AND NON-PRECISION PARTS

OF { IRON, STEEL, BRASS, ZINC, COPPER, ALUMINUM, FIBRE, WOOD or PLASTIC

THEY MAY BE { Cast, Die-Cast, Machined, Tooled, Polished, Enameled, Stamped, Formed or Molded

IT'S LOGICAL THAT THE MAKERS OF MARKING AND NUMBERING MACHINES SHOULD DO YOUR MARKING



WE MAKE A COMPLETE LINE OF STANDARD OR SPECIAL MARKING AND NUMBERING MACHINES AND TOOLS.

LET US BID ON YOUR ENGRAVING AND MARKING

The ACROMARK Company

7-11 MORRELL ST., ELIZABETH 4, N. J.

For more details circle NED-153 D3 on enclosed inquiry slip

INDUSTRIAL INCINERATORS
are large capacity models

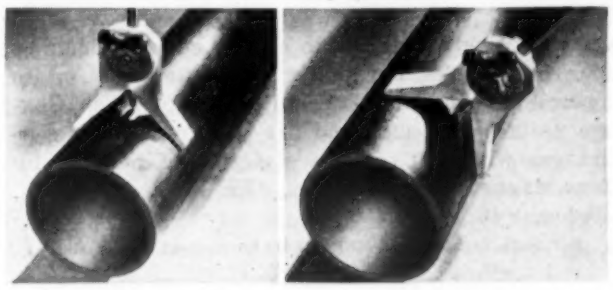
Two models with 10 and 15-bushel capacities have been added to the line of Wincinator commercial and industrial incinerators. Designed to consume practically any type of combustible waste or refuse without smoke, dirt or obnoxious fumes, incinerators are suitable for in-plant use. They are available for firing with choice of fuels, and standard or special controls can be employed. Illustration shows oversize feed doors which accommodate large, bulky containers or bundles.

Made by **Winnen Incinerator Co.**, Dept. A, 932 Broadway, Bedford, O.

For more details circle NED-155 D3 on enclosed inquiry slip

CENTERING TOOL
compact unit serves many purposes

Serving as protractor, center head, center punch, level and scale, this Boyce centering head is pocket-size tool. It has dial set leveling gage and can be



used to mark a point at any degree from center on pipe or round stock. It will measure or establish the degree of any angle of the bend on outside or inside of any circumference. It will measure the degree of declivity of any flat surface. It also serves to layout keyways, manifolds and butt-ins in piping. Made by **Contour Marker Corp.**, 1841½ E. Compton Blvd., Compton, Calif.

For more details circle NED-156 D3 on enclosed inquiry slip

Herringbone Gear Drives

Link-Belt Co.—Detailed information about single, double and triple reduction enclosed herringbone gear drives is in 36-page illustrated book 2519. Drives are used to transmit power at required speeds to conveyors, line shafts, blowers, pumps, agitators, hoists, machine tools, etc. Installation photographs, design features, horsepower rating tables and other data on 39 drive sizes in 534 ratios from 0.4 to 2480 hp are included.

For more details circle NED-157 D3 on enclosed inquiry slip

ALLSPEED MOTOR DRIVE is available in both upright (shown here) or horizontal models. Standard NEMA frame motors are used on all sizes. Available in speed variations from 2:1 up to 16:1 and adaptable to any machine—new or old. Units are also available without motors.

Worthington Allspeed Motor Drive

can increase your production by . . .

- Assuring peak production speeds
- Providing instantaneous, smooth, stepless speed control—the correct operating speed for each job
- Enabling you to change from minimum through maximum speed while motor is in motion
- Guaranteeing automatic and positive belt tensioning—no time wasted adjusting belts

Learn more about the cost-cutting features of Allspeed Motor Drives. Write for Bulletin AS-1600-B6. Worthington Corporation, Oil City, Pennsylvania.

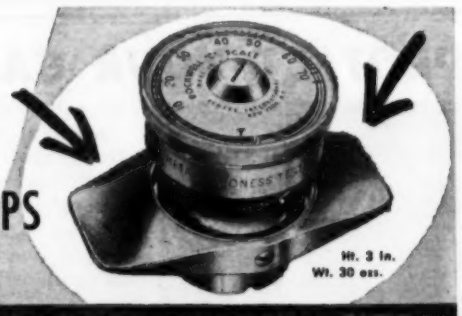
AS.3.4

WORTHINGTON

Allspeed Drives

For more details circle NED-154 D3 on enclosed inquiry slip

JUST PRESS HANDGRIPS TO



TEST HARDNESS OF ANY SIZE, SHAPE, TYPE METAL...

DIRECT DIAL READINGS

ACCURACY GUARANTEED BY INDIVIDUAL CALIBRATION

AVAILABLE IN:
- Rockwell "A" Range 35-75 Scale
- Rockwell "B" Range 5-100 Scale
- Rockwell "C" Range 6-70 Scale
- Rockwell "15N" Range 70-95 Scale
- Brinell Medium Range 100-440 Scale
- Brinell Low Range 50-260 Scale

Write today for Booklet ET 429 or demonstration in your shop.

NEWAGE INTERNATIONAL

ERNST PATENT

portable metal hardness testers

MADE IN U.S.A.

NEWAGE INTERNATIONAL, INC., 235 E. 42 ST., NEW YORK, N.Y.

NEWAGE (CANADA) LTD., 1174 BAY STREET, TORONTO

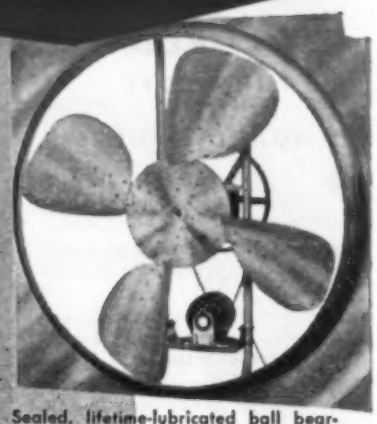
For more details circle NED-158 D3 on enclosed inquiry slip

At Last...

AN INDUSTRIAL FAN WHICH

REQUIRES NO MAINTENANCE

OFFERS FULL 10-YEAR GUARANTEE



Sealed, lifetime-lubricated ball bearings in both fan and motor never require lubrication. Install 'em and forget 'em.

INDUSTRIAL FANS BY

Murray COMPANY OF TEXAS, INC.

Atlanta, Ga.

H. C. BIGLIN CO., INC.

177 HARRIS STREET, N.W. • ATLANTA, GEORGIA

For more details circle NED-159 D3 on enclosed inquiry slip

"Multi-Pic"

WELD-CLEANING HAMMER

HAS 5 CONTOUR FORMING HEADS . . . . . PATENTED FREE-FLOATING HEAD DESIGN DELIVERS 5 SEPARATE CLEANING BLOWS WITH EACH SWING . . . CLEANS 5 TIMES FASTER . . LASTS 5 TIMES LONGER THAN SINGLE-HEADED HAMMERS.

Illustrated Model MP-2-M $2.40 each.

Quantity Prices 10 to 20% Less.

WOOD HANDLE AND BRUSH EQUIPPED MODELS ALSO AVAILABLE. WRITE FOR BULLETIN FORM MP6

MANUFACTURED BY

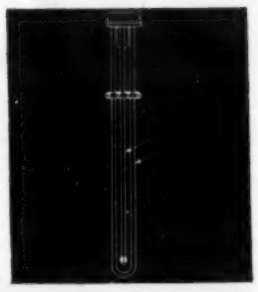
BERNARD WELDING EQUIPMENT COMPANY

10228 Avenue N. Chicago, Illinois

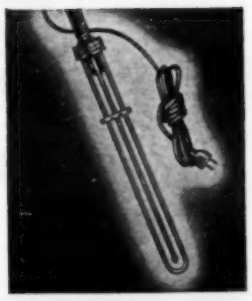
For more details circle NED-160 D3 on enclosed inquiry slip

Tube Talk THE "HOW-TO" COLUMN

PROBLEM: Tubing for automatic electric immersion heaters, manufactured by The Still-Man Company, New York, N.Y., failed in forming operations. Finish was also poor, requiring additional work before shipment. These heaters are used in tanks holding chemicals, photographic solutions, drugs, water, electroplating solutions, etc.



SOLUTION: After trying a variety of alloys, The Still-Man Company selected corrosion-resisting Weldrawn 316 Stainless Steel tubing ⅜" O.D. x .032 wall, furnished by Superior Tube Company.



RESULT: Since using Superior Weldrawn Stainless Tubing, Still-Man has had negligible rejects due to bending and forming. Finish required no additional treatment. Production now standardized.

Suggestion—Write for information and literature today.

SUPERIOR TUBE COMPANY

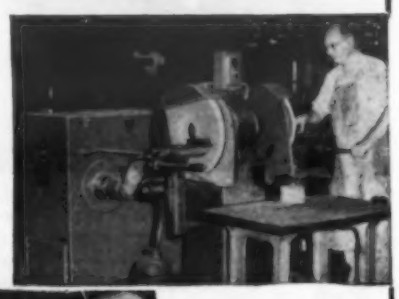
2018 Germantown Ave., Norristown, Pa.

For more details circle NED-161 D3 on enclosed inquiry slip

STOP DUST
INSTANTLY WITH **DUSTKOP**

300 cfm to 10,000 cfm standard pre-tested units available in stock

- LOW COST
- IMMEDIATE INSTALLATION
- SAVES HEAT
- PORTABLE



2405 ◀ cfm 1400▲ cfm

DUSTKOP

WRITE FOR

- RECOMMENDATION about your dust problem. No obligation
- CATALOG 605-2

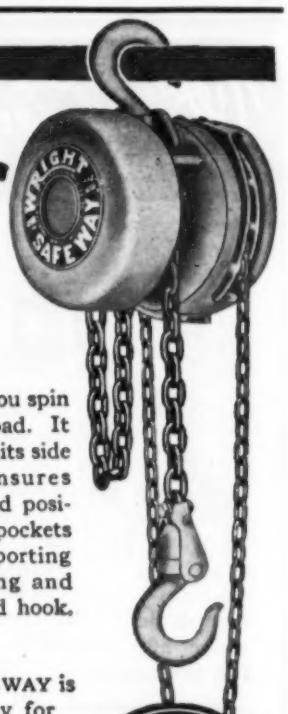
AGET-DETROIT CO.
202 S. Main St. Ann Arbor, Mich.

▲ For more details circle NED-162 D3 on enclosed inquiry slip ▲

an ACCO product

NEW.. IMPROVED!

- Here's the new, improved WRIGHT SAFEWAY Hoist . . . made in sizes from ½ to 4 tons.



Many Features

Hand chain guard lets you spin chain to raise or lower load. It speeds operation and permits side pull. Refined brake insures smooth, easy lowering and positive braking. Five formed pockets in sheaves. All load supporting parts are steel. Rocking and swiveling drop-forged load hook.

Priced Right

The WRIGHT SAFEWAY is priced right. It will pay for itself in time saved. Write today for literature and prices.

WRIGHT Hoists Trolleys Cranes

ACCO
WRIGHT HOIST DIVISION
AMERICAN CHAIN & CABLE
York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-163 D3 on enclosed inquiry slip ▲

ENGRAVING and MARKING

The Green Engraver

ENGRAVES, ROUTS PROFILES and MODELS

A real money saver for industry.
Proven by the experience of tool and die, electronic machine, radio, electrical and instrument manufacturers.

The Green Engraver zips out precision work on metal, plastics, wood, glass, hard rubber etc. . . . engraves panels, name plates, scales, dials, molds, lenses, instruments, instruction plates, directional signs . . . by simple tracing. *Routing, profiling and three dimensional modeling indicate its versatility.* Electric etching attachment available.

DIAL STENCIL

DIRECTIONAL SIGN

BARREL DIAL

Specify the Green Engraver for the best in low cost performance.
Special attachments and engineering service available for production work.

FREE — Fact-packed folder yours upon request.

Green Instrument Co. INCORPORATED
375 PUTNAM AVENUE CAMBRIDGE 39, MASS.

▲ For more details circle NED-164 D3 on enclosed inquiry slip ▲

REFRIGERATION COMPRESSOR for air conditioning applications

Rated at 56.8 tons under ASRE Group 4 conditions, the CLS-2100 four-cylinder V-type refrigeration compressor has a dual voltage 208/220/-440-v, 60-cycle motor that can be field connected for any one of the three voltages. It can also be adapted to part-winding starting on 208/220-v service. Compressor is also available with two-phase, 60-cycle or three-phase, 50-cycle motors. Unit is designed for air conditioning use and incorporates an automatic reset, spring-loaded high-to-low side refrigerant valve. Compressor has a reversible oil lubricating pump that supplies oil to bearing surfaces regardless of motor rotation direction. It uses Freon-12 refrigerant. Made by **Westinghouse Electric Corp.**, Air Conditioning Div., Dept. 037, 200 Readville St., Boston 36, Mass.

▲ For more details circle NED-165 D3 on enclosed inquiry slip ▲

ELECTRIC CONTROLLER for valves, signals and motors can be located up to 40 ft away

Vapor-actuated electric controllers provide accurate, dependable means for operating such equipment as solenoid valves, warning signals and motors. Various types of bulbs are offered with temperature ranges varying in amount between high of 450° F and low of −20° F, in both Fahrenheit and Centigrade ratings. Tubing lengths up to 40 ft permit use of instrument remote from process or equipment to be controlled.

Electrical control element is heavy duty single-pole double-throw switch. Red and green pilot lights show position of switch at a glance. Standard models operate on 115-v ac, but units can be supplied for up to 250-v ac or dc service. Dial thermometer clearly indicates temperature. Adjusting knob can be set at any point in temperature range to select point of operation for switch. Made by **H. O. Trerice Co.**, 1426 W. Lafayette Blvd., Detroit 16, Mich.

▲ For more details circle NED-166 D3 on enclosed inquiry slip ▲

* LET **BIG JOE** DO YOUR LIFTING

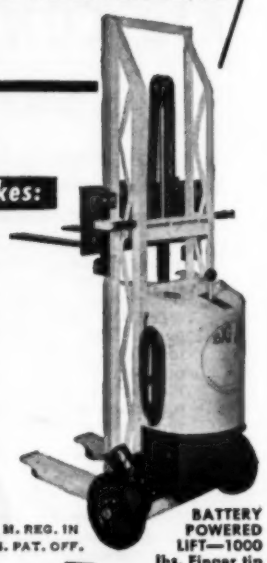
Load, move, unload or stack materials easily and quickly

Big Joe Lifts have what it takes:

- All welded steel frame for strength.
- Powerful hydraulic unit for easy lifting.
- Ball or roller bearings for smooth operation.
- Big wheels and casters for easy movement.
- Positive lock brakes for safety, stability.

All this plus low cost, long life, versatility!

Manual Platform Model from $236.50
Battery Operated Fork Model from $587.50



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BATTERY POWERED LIFT—1000 lbs. Finger tip control

Write for Specifications
Distributors in Principal Cities

BIG JOE MANUFACTURING COMPANY
Cable Address: Big Joe
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Let BIG JOE do it!

See us at Packaging Show, Booth 812, Chicago, April 20-23; also at National Materials Handling Exposition, Booth 1434, Philadelphia, May 18-22

▲ For more details circle NED-167 D3 on enclosed inquiry slip ▲

KNU-VISE pliers help speed aircraft production

Twenty-two Knu-Vise toggle-action pliers accompany this huge aircraft assembly jig when delivered to a prominent airplane manufacturer. The pliers play an important part in attaching longerons and aluminum angles to section of fuselage.

This job shows one of the countless ways in which Knu-Vise pliers and clamps are used to facilitate production.

Three Knu-Vise models selected for their high efficiency in specific operations: P-400, P-1200, P-1800.

Photo, courtesy of Banner Die & Fixture Co., Detroit.

KNU-VISE PRODUCTS LAPEER MFG. CO.
3062 DAVISON ROAD • LAPEER, MICHIGAN

WESTERN DIVISION: 422 MAGNOLIA STREET • GLENDALE, CALIFORNIA

▲ For more details circle NED-168 D3 on enclosed inquiry slip ▲

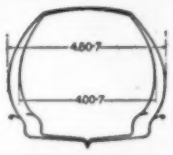
NOW! GOODYEAR ANNOUNCES A LINE OF PNEUMATIC INDUSTRIAL TIRES

FOR WIDE BASE (Super Width) RIMS

GOODYEAR WIDE BASE TIRES OFFER 8 GREAT ADVANTAGES

- Wider, flatter tread—longer wear
- Lower cost per mile
- Low rolling resistance
- Improved appearance
- Greater cross-section—more air volume
- Increased flotation because of its extra cushioning
- Greater stability
- Easier steering

Here are the sizes of Goodyear tires that fit the new Wide Base Rims. Note, for example, in the new size marking, the 400 x 7 is now marked 480/400 x 7.



280/250 x 4	480/400 x 7
340/300 x 5	480/400 x 8
340/300 x 7	530/450 x 7
410/350 x 6	570/500 x 8

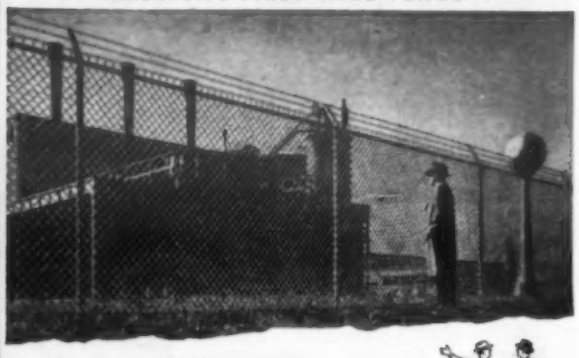
GOODYEAR offers you a complete line of Pneumatic Industrial Tires to fit the new Wide Base (Super Width) Rims. For complete information contact the Goodyear dealer nearest you. He will be happy to show you how these tires can meet your particular needs—cut your operating costs. Or, if you prefer, write to:
Goodyear, Industrial Tire Sales, Akron 16, Ohio.

GOODYEAR
INDUSTRIAL TIRES

▲ For more details circle NED-169 D3 on enclosed inquiry slip ▲

PAGE FENCE - Since 1883

• AMERICA'S FIRST WIRE FENCE •



Could you **blame** yourself if failure to safeguard property resulted in loss? After all, isn't property protection a responsibility of all management? Security is a job for Page Chain Link Fence, available in heavily galvanized Copper-Bearing Steel, rust-immune Stainless Steel or corrosion-resisting Aluminum. But PAGE means more than a quality product. It is a complete fence service, performed by more than 100 firms having technical training and fence erecting know-how, and conveniently located throughout the country. For illustrated data and name of firm nearest you—

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

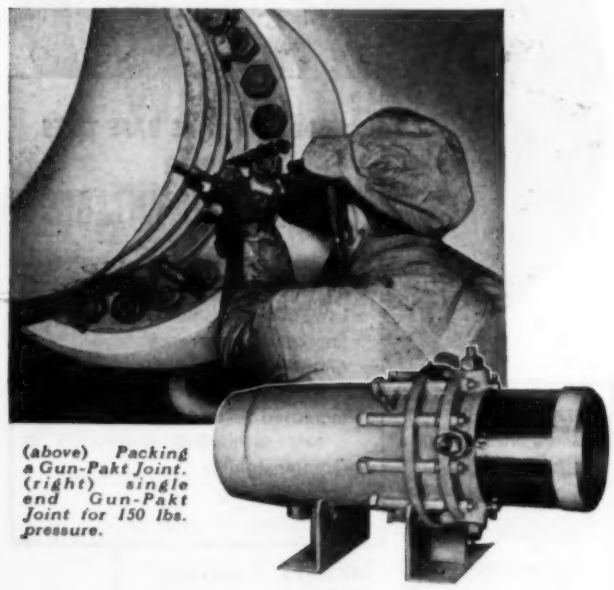
▲ For more details circle NED-170 D3 on enclosed inquiry slip ▲

AVOID SHUTDOWNS! USE EXPANSION JOINTS PACKED UNDER FULL STEAM PRESSURE

Production schedules can be ruined by repair and service shutdowns on steam distribution lines. Avoid shutdowns by using the slip-type expansion joints that can be packed under full steam pressure—Yarway Gun-Pakt Expansion Joints.

You simply insert a piece of Yarway plastic packing, twist a wrench, and the joint is tight...the job done.

Other Yarway Gun-Pakt advantages—(1) strong, rugged construction with less chance of major shutdowns, (2) fewer joints needed per length of pipeline because of longer sleeve traverses, (3) lower year-in-year-out maintenance costs.



(above) Packing a Gun-Pakt Joint. (right) single end Gun-Pakt Joint for 150 lbs. pressure.

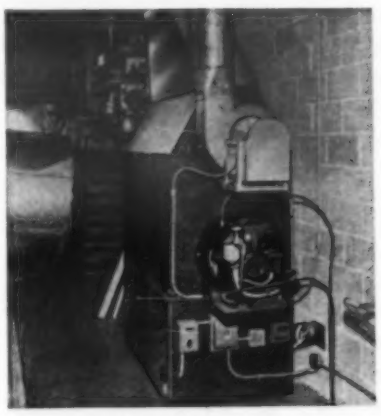
Public utilities, industrial plants and institutions find Gun-Pakt one of the greatest expansion joint advancements in recent years. See how Gun-Pakt joints will fit into your steam lines. Write for Yarway Expansion Joint Bulletin EJ-1912.

YARNALL-WARING COMPANY
131 Mermaid Avenue, Philadelphia 18, Pa.

YARWAY | *gun-pakt expansion joints*

▲ For more details circle NED-171 D3 on enclosed inquiry slip ▲

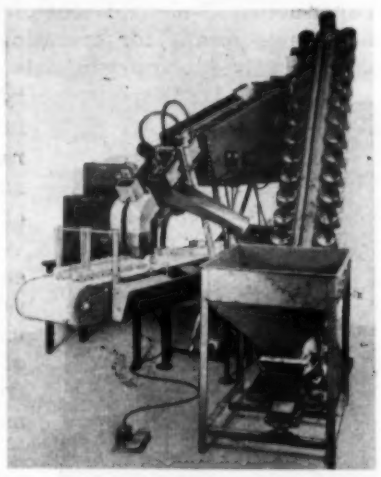
SPACE HEATING UNITS 12 sizes deliver to 2 million Btu



Multiple oversize blowers operating at moderate speed and driven by resilient mounted motors provide positive air delivery for long duct runs in series D heating units. Designed for plant and office central heating systems, compact units have welded, one-piece construction. Full chrome-nickel stainless steel firebox of teardrop design, streamlined headers and multiple convector tubes are enclosed in heavy casing formed to heater contour. Design of heat exchangers utilizes direct flame-metal-air principle. Twelve sizes deliver from 200,000 to 2 million Btu. Units can be light or heavy oil, gas or combination gas-oil fired. Made by **National Heater Co.**, 2184 Cleora Ave., St. Paul 5, Minn.

▲ For more details circle NED-172 D3 on enclosed inquiry slip ▲

CONVEYORIZED COUNTING UNIT speeds packaging of predetermined amounts of wide variety of parts



Of improved design, Count-O-Matic counting system is used primarily for packaging by count a large variety of parts. Speeds range from 2000 to 6000 parts per minute on such objects as screws, buttons, nuts, bolts, rivets, dowels, washers, lockwashers and nails. Any predetermined count from 1 to 1000 can be obtained by merely setting the dials of the electronic instrument. Changeover time from one part to another is usually less than 5 minutes.

Also shown in illustration is previously announced Lift-O-Matic bucket elevator which deposits parts gently at desired delivery point. A very short discharge chute connecting the elevator to the Syntron feeder at the top of the aligning rollers can be used. This reduces tumbling or mishandling of parts. Made by **U. S. Engineering Co.**, 40-22 22nd St., Long Island City 1, N. Y.

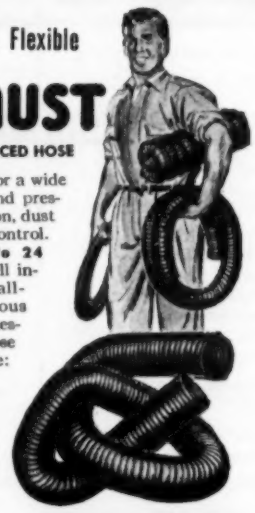
▲ For more details circle NED-173 D3 on enclosed inquiry slip ▲

FOR VENTILATION, FUME AND DUST CONTROL AIR CONDITIONING

Light, Strong, Flexible

FLEXAUST

SPIRAL-REINFORCED HOSE



Flexaust is suitable for a wide variety of suction and pressure uses in ventilation, dust collection and fume control. **SIZES 1¼ inches to 24 inches.** Write for full information on this all-purpose hose. Various Flexaust types, accessories, and other hose types also available:

BLOFLEX *Non-reinforced collapsible*

PORTOVENT *Ring-reinforced retractable*

AMERICAN VENTILATING HOSE COMPANY

Dept. N-4, 100 Park Avenue, New York 17, N. Y.

▲ For more details circle NED-174 D3 on enclosed inquiry slip ▲

Want to Keep Up to Date On ALVEY CONVEYOR SYSTEMS?

If you are the man who is responsible for solving materials handling problems in your company, you should be informed about Alvey Package Conveyor Systems. You are sure to benefit from the broad knowledge and wide range of experience of Alvey engineers.

If you have a problem right now, we'll be glad to work with your technical staff. If you want material for future reference, write today, giving us your name and title. No obligation, of course.

Engineered Package Handling Systems

Everytime You MAN Handle a Package You Add To The Cost Of Your Product

ALVEY CONVEYORS St. Louis

ALVEY CONVEYOR MFG. CO.
9259 Olive St. Rd., St. Louis 25, Missouri
BRANCH OFFICES IN PRINCIPAL CITIES

▲ For more details circle NED-175 D3 on enclosed inquiry slip ▲

New "PULL-GEAR" SPEED-REDUCING PULLEY Increases Drill Press Capacity

Amazing new internally geared speed reducer doubles drill press capacity. Greater power, greater efficiency, greater productivity. Provides the correct speed and power for larger drilling, reaming, tapping and boring on light presses. Easily installed in five minutes. Adaptable to all type machines. Spindle speed range approximately 45 to 2000 RPM. Write for literature.

Made in 3 Motor Shaft Sizes ½" • ⅝" • ¾"

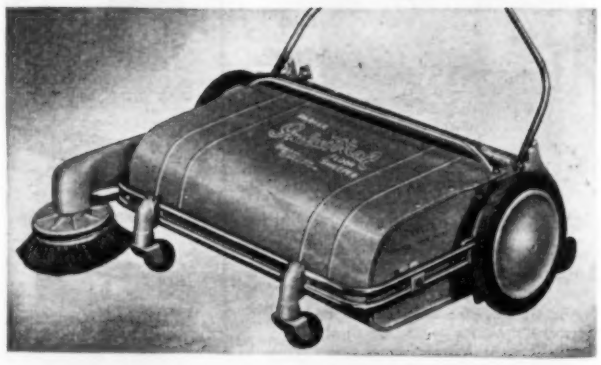
Some Territories Open to Jobbers

THE PULL-GEAR CO. WRITE FOR LITERATURE

4118 E. 8-Mile Rd., Detroit 34, Mich.

▲ For more details circle NED-176 D3 on enclosed inquiry slip ▲

MAN SAVER



Sweeps up to 400% faster than costly pushbroom cleaning . . . saves money . . . saves manpower

A Parker Floor Sweeper saved $2100 a year for a food manufacturer — $520 a year for a lumber yard—75% of all sweeping costs for a building material manufacturer. *You, too, can save.*

Sweeps all type floors. Collects and sweeps in one operation. Easy to empty. A money-saver for any plant from small garage to large factory or warehouse.

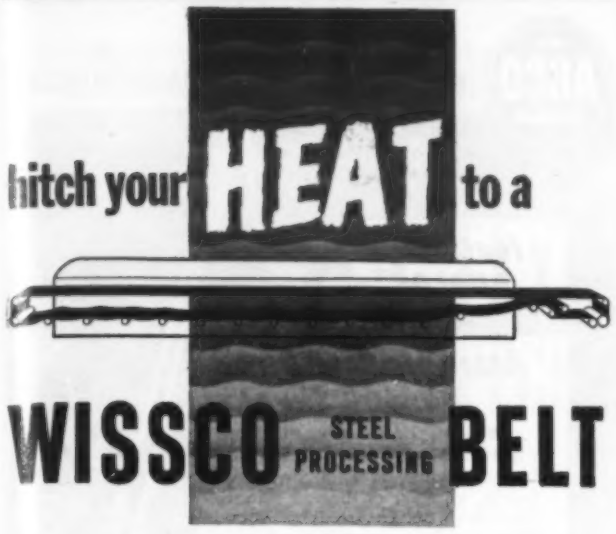
Now available — information file containing time studies, case histories, and full details. *Write, wire, or telephone today.*

FACT FILE AVAILABLE

PARKER INDUSTRIAL FLOOR SWEEPER

PARKER SWEEPER CO., 64 Bechtle Ave., Springfield, Ohio

▲ For more details circle NED-177 D3 on enclosed inquiry slip ▲



Turn your products out faster, more economically in continuous straight-line production with a Wissco Belt. To order, write or call our nearest sales office.

THE COLORADO FUEL AND IRON CORPORATION—Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION—Oakland, California
WICKWIRE SPENCER STEEL DIVISION—Atlanta • Boston • Buffalo
Chicago • Detroit • New York • Philadelphia

1430

WISSCO BELTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION CFI

For more details circle NED-178 D3 on enclosed inquiry slip

Keep Work Records Neat
PROTECT 'EM FROM GRIME!
GUARD 'EM FROM TEARING!

Just slide work records, valuable data, sales material, etc. into Ful-Vu protector sleeves of crystal clear Mikafilm for permanent protection, neat arrangement and attractive display. Protectors fit standard ring binders. Unique Ful-Vu design guards against tearing or pulling loose at binding edge.

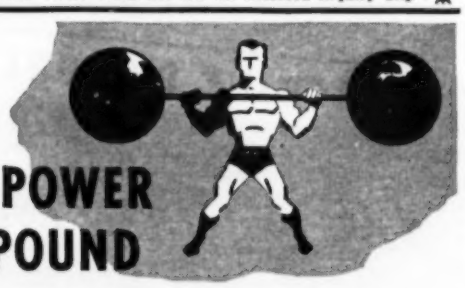
FREE SAMPLES: Send for sample Super Pul-Pruf protectors plus 32-page catalog of Ful-Vu albums, binders, shop record holders, etc.

Dept NED-43
COOKS', INC.
CAMDEN N. J.

PROTECTS Ful-Vu GLORIFIES
SYSTEMS OF DISPLAY

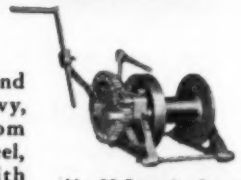
IN CANADA: Preston-Noelting, Ltd., Stratford, Ont.

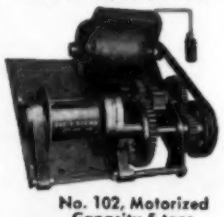
For more details circle NED-179 D3 on enclosed inquiry slip



more POWER per POUND in DAVID ROUND WINCHES

Where space available is small and the load-handling job is heavy, good service can be had from installation of a compact, all-steel, spur-geared DR Winch. With capacities up to 5 tons, these rugged hand powered or electric winches are adaptable to countless heavy-duty lifting and pulling operations. Sold through established distributors everywhere. For information write David Round & Son, Box 883, Cleveland 22, Ohio.


No. 99 Capacity 5 tons

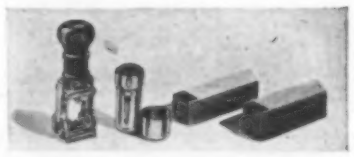

No. 102, Motorized Capacity 5 tons

Manufacturers of CHAIN HOISTS • ELECTRIC HOISTS • I-BEAM TROLLEYS • CRANES • WINCHES

David Round DR DAVID ROUND HOISTS & CRANES

For more details circle NED-180 D3 on enclosed inquiry slip

PLASTIC STAMP DIES
resist ink acids, solvents



Engraved Vinylite stamp dies to fit all standard marking equipment are now available in standard and made-to-order sizes of type faces and logotypes. Plastic resists ink acids, petroleum solvents or greases and is unaffected by gasoline, kerosene, benzine and similar solvents. Type depth is three times that of rubber stamps to minimize clogging of stamp faces. Cushion-like resiliency of plastic resists abrasion and allows stamp to conform to irregular surfaces. Dies are available in all standard type faces and sizes as well as special logotypes, figures or trade marks. Special inks are furnished in all colors. Made by **Krengel Mfg. Co.,** 229 Fulton St., New York 7, N. Y.

For more details circle NED-181 D3 on enclosed inquiry slip

LAMP ASSEMBLY
includes pull-chain type switch

Compact housing of No. 4200 lamp assembly includes single Levolier No. 41 switch for controlling both sockets. Latter are heavy duty industrial type and can be swiveled nearly 360 degrees for flexibility in lighting. Housing is molded phenolic in brown or ivory. Two binding posts are exposed when cover is removed for simplicity in wiring. Unit is adaptable to floor and table lamps. Made by **McGill Mfg. Co.,** 1250 N. Lafayette St., Valparaiso, Ind.

For more details circle NED-182 D3 on enclosed inquiry slip

FLEXIBLE SHAFT MACHINES
truck mounted for portability

Consisting of a hand truck with a dual wheel rear axle and front skids plus a deck-mounted Strand-flex four-speed gear drive flexible shaft machine, this unit can be moved right to the job. Clamp on handle holds the handpiece and tool of the machine. Metal box holds complete set of tools and attachments. Wheels are ball bearing and rubber tired for ease of movement. Yoke mounting of flexible shaft machine provides 360-degree turning radius. Made by **Franklin Balmar Corp.,** N. A. Strand Div., Dept. N, Woodberry, Baltimore 11, Md.

For more details circle NED-183 D3 on enclosed inquiry slip

The Portable MORSE ROTATOR

THE NEWEST ADDITION TO 25 YEARS OF SUCCESSFUL MANUFACTURING EXPERIENCE

MODEL 500

SAVES TIME! SAVES LABOR!
SAFELY ROTATES UP TO 500 LBS. AT 10, 20 OR 40 RPM

A powerful, compact motorized unit that will cut costs of mixing, tumbling, cleaning, etc. Scientifically engineered for smooth, safe revolving. Can be loaded by ONE MAN and is easily moved. The power drive has a ¾" dia. shaft and is equipped with self-aligning bearings. Four 4" dia. Neoprene drive wheels adjustable to take from 1 to 55 gal. cylindrical containers. Wt. before crating 137 lbs. Furnished with motor and gear reduction unit. *Write For Complete Information.*

MORSE MANUFACTURING CO., INC.
756 West Manlius St. East Syracuse, N. Y.

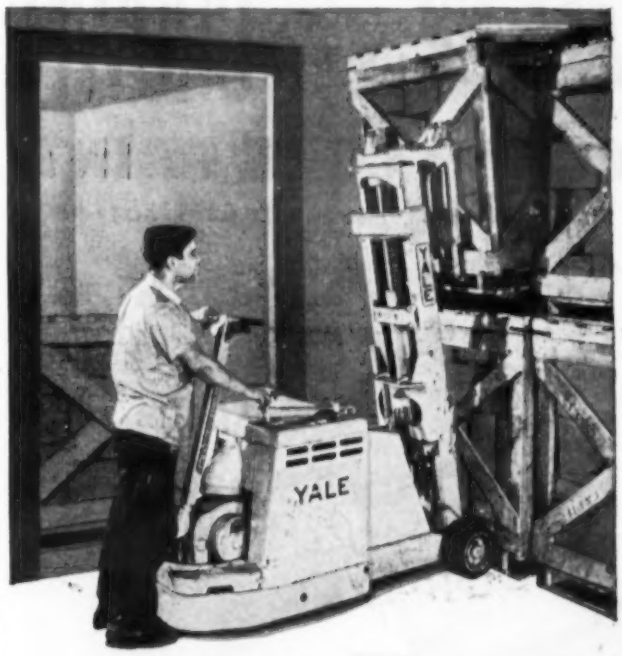
For more details circle NED-184 D3 on enclosed inquiry slip

A Platecoil has more heat transfer area than a pipe coil twice its size. Thus it takes only half as much Platecoil to heat a given area. You have 50% less steel to pay for so you can save nearly 50% in initial cost. The Platecoil takes only half as much space in the tank. The greater BTU transfer per unit area of Platecoil also means faster heating or cooling. Platecoils require less maintenance and can be removed without dumping the solution.

Send for complete technical manual and descriptive Bulletin No. P57.

PLATECOIL
KOLD-HOLD MFG. CO.
LANSING 4, MICHIGAN

For more details circle NED-185 D3 on enclosed inquiry slip



YALE WORKSAVERS

give big truck power... where big trucks can't go

• Where size and weight rule out big trucks, YALE WORKSAVER ELECTRIC TRUCKS take over. Yes, YALE WORKSAVERS save industry time, manpower and money where low-load capacity flooring, unreinforced elevators and ramps had previously restricted materials handling operations to back-breaking manual moving, lifting and stacking.

YALE WORKSAVERS give big truck advantages...big truck versatility . . . at small truck cost! Features include forward and reverse power travel—hydraulic lift—complete range of use-extending attachments. Contact your local Yale Representative for a demonstration of the WORKSAVER line in your own plant . . . at your own time.

YALE*
*Registered trade mark

MATERIALS HANDLING EQUIPMENT

MAIL THIS COUPON TODAY

The YALE & TOWNE Manufacturing Co., Dept. 374
Roosevelt Blvd. and Haldeman Ave., Phila. 15, Pa.
Please have your local representative call for an appointment.

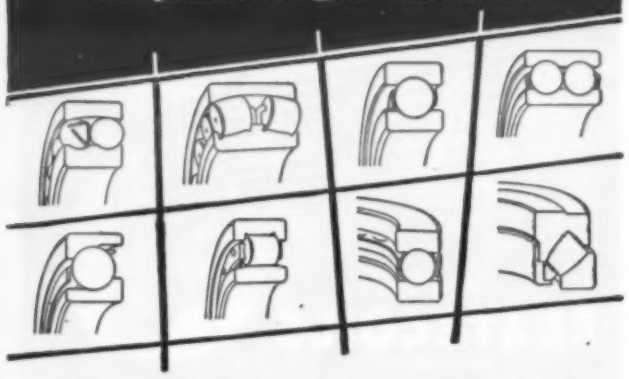
Company_____
Name_____ Title_____
Street_____ City_____ State_____

In Canada write: The Yale & Towne Mfg. Co., Box 337—Postal Station "A," Toronto

Gas, Electric, Diesel Lift Trucks • Worksavers • Hand Trucks • Hand and Electric Hoists • Pul-Lifts

For more details circle NED-186 D3 on enclosed inquiry slip

One for every place—
One place to get them all . . .



SKF makes all of these eight types of bearings which serve virtually every equipment need, and can supply them from the smallest to the largest through distributors from coast to coast.

Whether it's an emergency or routine, you can depend on your local SKF Distributor to give you fast, dependable service. Your SKF Distributor *knows bearings* . . . knows how to *keep* the right bearing in the right place. 7418

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.
—manufacturers of SKF *and* HESS-BRIGHT *bearings.*

SKF BALL AND ROLLER BEARINGS

▲ For more details circle **NED-187 D3** on enclosed inquiry slip ▲

NEW CROWN
COLOR CODE PAINT
for quick, easy identification

- JUST SPRAY ON
- HANDY CAN
- WIDE RANGE OF COLORS

THE SIMPLEST WAY TO COLOR CODE FOR:
- Type of Material
- Hardness or Alloy
- Supply Source
- Receiving Date
- "OK" or Reject
- Any Application Where Coding or Identification of Metal Is Needed

Easier to use and faster. Requires no brushes or open containers. Dries dust-free in 5 to 10 minutes, tack-free in 15 to 20 minutes and hard in one to two hours. Full bodied, with excellent "tooth" for firm adhesion, even to dirty or semi-greasy surfaces. Eliminates most need for surface preparation. Resists rubbing off or weathering outdoors. Fast, opaque colors.

12 COLORS . . . ORDER BY NUMBER:

No.	Color	No.	Color
10	Red	17	Pink
11	Green	20	Orchid
12	Yellow	21	Copper
13	Dark Blue	22	White
14	Orange	23	Black
15	Light Blue	25	Aluminum

Prices F.O.B. Woodstock, Illinois

$1.59 PER 12 OZ. CAN

15% discount in case lots of 12 cans of one color
Freight allowed on shipments of 8 cases or more
Applicable state or local sales tax extra

CROWN INDUSTRIAL PRODUCTS COMPANY
723 Amsterdam Ave., Woodstock, Illinois

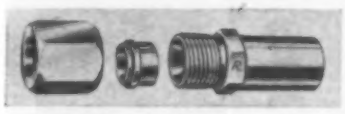
Please ship me the following CROWN Color Code Paint:

Quantity _____ cans of Color No. _____ Quantity _____ cans of Color No. _____
_____ cans of Color No. _____ _____ cans of Color No. _____
_____ cans of Color No. _____ _____ cans of Color No. _____
_____ cans of Color No. _____ _____ cans of Color No. _____
☐ Our Purchase Order No. _____ ☐ Check enclosed

COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____
_____
Authorized Signature

▲ For more details circle **NED-188 D3** on enclosed inquiry slip ▲

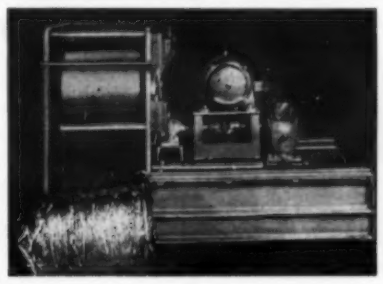
TUBE END REDUCER
permits use of two tubing sizes



Added to standard line of Ferulok flareless "bite" type tube fittings is a tube end reducer. It converts any Ferulok fitting into a combination size unit, permitting connection of a smaller size tube. Reducer is inserted into the tube connection end of the regular fitting and attached with the nut and ferrule of that fitting. Other end of reducer is coupled to the smaller size tubing with nut and ferrule. Fitting is available for all commonly used reductions within the Ferulok size range of ¼ through 1 in. OD tubing. Fittings are for heavy wall tubing. Made by **Parker Appliance Co.,** Dept. NE, 17325 Euclid Ave., Cleveland 12, O.

▲ For more details circle **NED-189 D3** on enclosed inquiry slip ▲

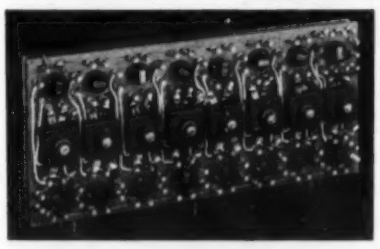
SCRAP & WIRE BALLER
forms 200 to 700-lb compact ball



Stringy metal scrap and wire is formed into compact 22-in. long by 28-in. diameter ball weighing from 200 to 700 lb by this scrap baller. Rotating mandrel automatically pulls scrap into balling chamber. As diameter of scrap increases, a heavy roller oscillating up and down keeps scrap ball compact. When maximum diameter is reached, motor is stopped and hydraulic device withdraws mandrel from center ball which then rolls from chamber on inclined plane. Made by **Phillips Mine & Mill Supply Co.,** 2303 Jane St., Pittsburgh 3, Pa.

▲ For more details circle **NED-190 D3** on enclosed inquiry slip ▲

BINARY SHIFT REGISTER
for low-energy transfer circuits



Usable for storage, counting and control of digital information in automatic computing or control equipment, Bi-Mag Register SRA-16 is a 16-stage magnetic binary shift register. It is intended for circuits having low energy transfer with an information rate between 0 to 25,000 pulses per second. Read-out interval after read-in can be made in microseconds or as long as required, thus providing an unlimited storage period. Register requires no stand-by power. Made by **American Machine & Foundry Co.,** Electronics Div., Dept. 153, 1085 Commonwealth Ave., Boston 15, Mass.

▲ For more details circle **NED-191 D3** on enclosed inquiry slip ▲

Speeds CHAMFERING, POINTING, FACING, REAMING OPERATIONS

At Keid-Hold Mfg. Co., two Pines Air-Operated Machines with single foot control speed tube deburring and facing operations. One operator produces 1200 tube ends per hour.

EXCLUSIVE FEATURES
OF PINES END-FINISHER SAVES TIME ON TUBE, PIPE, BAR JOBS.

Pines Portable End-Finisher is especially designed for fast, accurate work. Small and compact, its exclusive operating features save time. Forward travel of operating lever clamps and feeds work to rotating cutters in one pass. Operator always has one hand free for stock handling. Equipped with quick, interchangeable tool holders, chuck inserts, 8-speed sheave (760 to 3920 rpm), sturdy spindle, grease-sealed precision bearings. Unit illustrated handles stock diameters up to 2". Maximum feed stroke is 1¼". Automatic air-operated units for higher production work and larger sizes up to 5" capacity are also available.

Write for Free Bulletin

▲ Write today for more facts. Learn how these machines are built to save time on a wide range of work.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery
BENDING · BEADING · CHAMFERING · SWAGING MACHINERY
641 WALNUT • AURORA, ILLINOIS

▲ For more details circle **NED-192 D3** on enclosed inquiry slip ▲

an ACCO product — ACCO Registered DUALOC SLINGS

*featuring DUALOC**

Assemble Your Own DUALOC Slings

● With the component parts illustrated here you can assemble your own 1, 2, 3, or 4-leg bridle, choker, or basket slings for a wide variety of jobs. ACCO *Registered* DUALOC Slings have two collars to insure uniform strength. DUALOCS are the strongest wire rope slings made.

See your local ACCO Sling distributor who stocks them or write us.

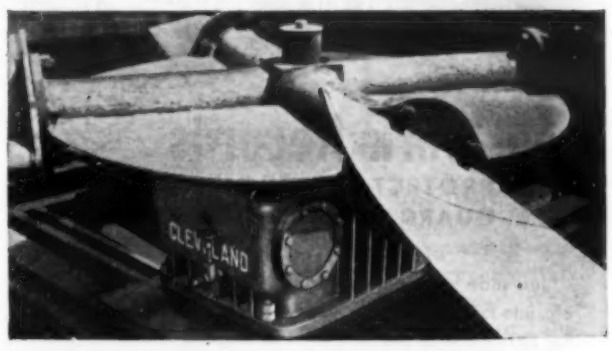
*Trade Mark Registered Patent No. 2463199

ACCO
WIRE ROPE SLING DEPARTMENT
AMERICAN CHAIN & CABLE
TRADE MARK
Wilkes-Barre, Pa., Chicago, Denver, Houston, Los Angeles, New York, Odessa, Tex., Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

ACCO Registered DUALOC Slings

▲ For more details circle **NED-193 D3** on enclosed inquiry slip ▲

QUIET COOLING TOWER DRIVE FOR HIGH SPEED OPERATION



THIS worm gear Cleveland CU unit is designed specifically for cooling tower service. Rugged, efficient, compact, it easily handles heavy-duty fans at high speeds under extreme conditions of heat and humidity—Q-U-I-E-T-L-Y.

Simple in design, foolproof in operation. Easily installed, serviced and adjusted. So inherently quiet as to be ideal for use in air conditioning of industrial and public buildings, offices, stores, hotels, theaters, etc.

Bulletin 135 gives sizes, dimensions and horsepower ratings. Write for yours today. The Cleveland Worm & Gear Company, 3283 East 80th Street, Cleveland 4, Ohio.

CLEVELAND WORM & GEAR COMPANY
Speed Reducers
Affiliate: The Farval Corporation, Centralized Systems of Lubrication

▲ For more details circle **NED-194 D3** on enclosed inquiry slip ▲

MACHINE DESIGNERS!

GET THE FULL STORY ON HANNIFIN'S

NEW Pilot-Master Air Control Valves!

HERE'S WHY MAINTENANCE MEN PREFER THEM . . .

FEWER VALVES TO STOCK
Use same valve 2-way or 3-way, normally open or normally closed.

FEWER PARTS TO STOCK
Unique cartridge construction makes "insides" easily replaceable.

INDUSTRIAL SOLENOIDS
Long-lasting, easy to change coils to any standard voltage.

¼", ⅜", ½", ¾", 1", 1¼" Sizes; Pressures to 150 p.s.i.
Write for Bulletin 231 and get the complete story!

HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave. • Chicago 24, Ill.
Air and Hydraulic Cylinders • Presses • Air Control Valves

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Don't take Chances..

with a

FLY SPECK!

"Your job ticket can be more valuable than a legal document. It must never be open to misunderstanding, or to grimy hands—or hungry flies!

So slide your production record into a crystal clear plastic envelope, and keep it there. Let your instructions stay clean, sharp, readable—in spite of rough handling. Only then will you reduce alibis, and costly mistakes.

Send for your FREE Kleer-Vu envelope today!

See what a difference it makes in speeding up production!

AMERICAN KLEER-VU PLASTICS, INC.

53-06 Grand Ave. Maspeth 78, N. Y.

▲ For more details circle **NED-196 D3** on enclosed inquiry slip ▲

Years Ahead **IN DESIGN**

Wheeler **FLO-LINER**

Combines high efficiency and smart styling with unique maintenance ease and economy. When detached, louver assembly is automatically suspended below channel by supporting chains — allows quick, easy access to operating equipment — 2 lamp and 4 lamp units for both single pin and bi-pin lamps!

Write for special FLO-LINER bulletin

Wheeler REFLECTOR COMPANY

275 CONGRESS STREET — BOSTON 10, MASS.
Distributed Exclusively Through Electrical Wholesalers

▲ For more details circle **NED-197 D3** on enclosed inquiry slip ▲

DIAMOND FIBRE BOXES

FOR LIGHT, EASY PARTS HANDLING

This is a typical materials handling job designed, fabricated, and lettered by C-D-F. Low-cost, lightweight Diamond Fibre was used. Fibre is strong, oil resistant, and can be readily formed. All work was done in the same C-D-F plant that made the fibre . . . one order solves your worries.

If you buy boxes, barrels, trucks, trays, receptacles of any size or shape . . . think of C-D-F, makers of top-quality Diamond Vulcanized Fibre. Talk to the man who knows . . . your C-D-F sales engineer . . . sales offices in principal cities. Write for big Receptacles Catalog and free Plastics Machining Notebook.

THE NAME TO REMEMBER . . . DIAMOND FIBRE RECEPTACLES

Continental-Diamond Fibre Company

NEWARK 30 DELAWARE

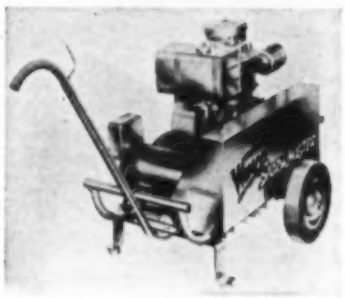
▲ For more details circle **NED-198 D3** on enclosed inquiry slip ▲

ROOM AIR CONDITIONERS extend into room only 13½ in.

Extending into room only 13½in., Rapidayton air conditioners for office and small plant use are available in ½ and ¾-ton model. The ¾-hp model is capable of controlling temperatures in an area up to 485 sq ft. Model shown has heavy gage steel cabinet of welded construction and is finished in decorative color. Controls are recessed inside top door of cabinet. Weight is 185 lb. Made by **Dayton Pump & Mfg. Co.,** Dept. NED, 500 N. Webster St., Dayton 1, O.

▲ For more details circle **NED-199 D3** on enclosed inquiry slip ▲

EMERGENCY ENGINE-GENERATOR base accommodates 11 engine makes



Standby emergency power is provided by model 3030-X Storm Master engine - generator which features 50 per cent overload capacity for motor starting and good voltage regulation. Universal mounting base, consisting of four slotted channels arranged in sets of two at right angles to each other, adjusts to 25 recent model engines representing 11 different makes. Unit can be sold with or without engine, and output depends on size of engine used. A 5-hp unit will deliver 2000 w output, while a 2½-hp engine has normal output of 200 to 350 w. Made by **Wincharger Corp.,** 2101 E. Seventh St., Sioux City 2, Iowa.

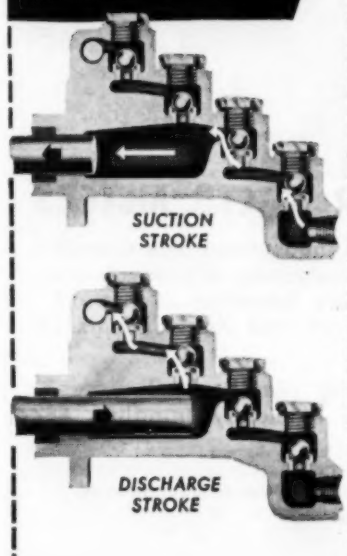
▲ For more details circle **NED-200 D3** on enclosed inquiry slip ▲

LARGE MAGNETIC PULLEY for belt conveyor application

Reported to be the largest nonelectric magnetic pulley ever built, this 2825-lb Perma-Pulley has 36-in. diameter by 36-in. belt width. It will be used by a Missouri lead company to remove tramp iron from −3-in. lead-zinc on a belt moving 300 fpm. Magnetic power is provided by Alnico permanent magnets and capacity is 840 tons per hour. Made by **Dings Magnetic Separator Co.,** 4758 W. Electric Ave., Milwaukee 46, Wis.

▲ For more details circle **NED-201 D3** on enclosed inquiry slip ▲

NEED PRECISION PUMPING?



This exclusive Milton Roy Liquid End Step-Valve...

...is one of the big reasons why Milton Roy Controlled Volume Pumps—both Air-Powered and Motor-Driven—give you *precise* pumping. The valve is non-clogging, snap-acting, and seats positively. Air and gases cannot be trapped. *Double* ball-checks prevent loss of accuracy if one ball is prevented from seating by particles in the fluid being handled. Pumping against pressures up to 25,000 psi, within volume ranges from 3 milliliters per hour up to 1360 gallons per hour per liquid end, Milton Roy Controlled Volume Pumps handle any clear liquids, solids in suspension, and highly viscous materials such as tars and sludges.

For detailed information on the *exclusive* Milton Roy Liquid End Step-Valve Design ...and on Controlled Volume Pumps . . . request Bulletin No. 151. Write today to—

MILTON ROY COMPANY

1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

▲ For more details circle **NED-202 D3** on enclosed inquiry slip ▲

Formerly 50 minutes... Now brush-deburred in 6 minutes

Eight times as fast . . . more uniform deburring . . . finer surface finish. These are the advantages gained by a large machinery manufacturer with an automatic power-brushing method. The part: a rack gear, 17 ft. long with more than 1000 teeth. The job: light deburring of machine-cut teeth, and blending the junctures of intersecting surfaces to form smooth curves in place of fragile, sharp edges.

With the help of their **O**sborn **B**rushing **A**nalyst, they devised the machine shown above. This automatically controlled machine with two heads of Osborn Fascut® brushes does the entire job in 6 minutes. Burr removal and surface juncture blend are far superior to former methods.

This is typical of thousands of cases where production is being vastly improved with Osborn power brushing methods. Find out how you can cut *your* costs! Call in your **OBA** today or write *The Osborn Manufacturing Company, Dept. Z-4, 5401 Hamilton Avenue, Cleveland 14, Ohio.*

Osborn Brushes

OSBORN POWER, MAINTENANCE AND PAINT BRUSHES AND FOUNDRY MOLDING MACHINES

▲ For more details circle **NED-203 D3** on enclosed inquiry slip ▲

JIG GRINDING ACCURACY *guaranteed**

INFINITE CONTROLLED SPEEDS 30,000 TO 65,000 R. P. M.

Easily connect jig grinder to jig borer or mill

Then you can finish grind in hardened steel to "tenths" . . . jig grind dowel holes square with a ground base . . . move location of holes in hardened steel blocks . . . jig grind interchangeable holes in hardened sections . . . grind small holes with diamond impregnated mandrels . . . grind contours and relief with tungsten carbide burrs . . . grind radii in die sections . . . eliminate jig bushings in tools where close spacing is essential.

Other infinitely controlled air driven spindle applications

Place spindle on most any machine. Use it for finishing contours on hardened steel working surfaces . . . burring or milling die castings . . . routing wood contours . . . carbide milling or finishing slots . . . finishing holes in hardened steel to "tenths" . . . grinding with diamond wheels, carbide burrs, or diamond impregnated mandrels.

Advantages—10 micro finishes using carbide mills . . . 6 micro finishes using mounted points, operates at any angle . . . air driven, air cooled, overheating prevented . . . speed controlled at optimum point . . . 3⅝" long motor uses little working space . . . By controlling speed at any point you abolish need for many constant speed spindles.

For immediate quotation please state machine tool application. Get this manual of photos showing operations Vulcanaire performs.

*Dependably accurate to "tenths"

Vulcanaire

BUILT BY TOOLMAKERS FOR TOOLMAKERS

VULCAN TOOL CO., 737 LORAIN AVE. DAYTON 10, OHIO

▲ For more details circle **NED-204 D3** on enclosed inquiry slip ▲

Won't Pull Apart!

OPW HOSE SWIVELS

THE STRONGEST LINK IN YOUR HOSE LINE

- NO PRODUCT LOSS
- NO DESTRUCTION OF PROPERTY
- NO HAZARD

Add life to your hose . . . make it easier to handle . . . eliminate twisting, kinking and tension resulting from rotary motion. Use OPW's leakproof Swivels with fueling nozzles, liquid dispensing nozzles, on all hose lines.

No. 2 Swivel for heavy duty pressure or vacuum service.

No. 17-ST Swivel for stationary installations such as service station delivery hose or similar applications.

WRITE FOR BULLETIN NP-3

OPW CORPORATION

2735 COLERAIN AVENUE • CINCINNATI 25, OHIO

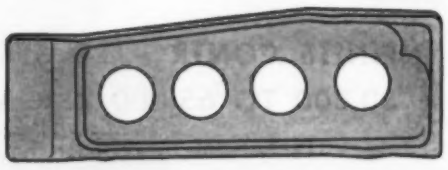
For more details circle NED-205 D3 on enclosed inquiry slip

MUELLER BRASS CO.

ALUMINUM FORGINGS

- STRONG AS STEEL BUT 1/3 THE WEIGHT.
- GOOD DIMENSIONAL STABILITY . . . MECHANICAL PROPERTIES RETAINED AT HIGH SPEEDS AND REASONABLE TEMPERATURES.
- REQUIRE LESS MACHINING AND FINISHING.
- FORGED TO YOUR SPECIFICATIONS.

MUELLER BRASS CO. • PORT HURON 27, MICHIGAN



102

For more details circle NED-206 D3 on enclosed inquiry slip

FASTER-SIMPLER

POSITIVE ANGULAR ACCURACY

the MAGNA-SINE

For any angular set-up, whether single or compound, simply insert standard gauge blocks between the Magna-Sine plates. Proper gauge blocks are indicated in the Robbins Table of Constants. Positive accuracy in a few moments. Work is securely held by magnetic attraction. In two models and sizes; also non-magnetic models for inspection set-ups.

SEND FOR CATALOG

OMER E. Robbins COMPANY

Manufacturers of the MAGNA-SINE and Other Precision Tools

5722 TWELFTH ST. • DETROIT 8, MICH.

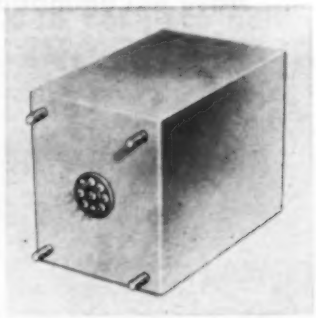
For more details circle NED-207 D3 on enclosed inquiry slip

BLOW GUN
air flow is easily controlled

Built with lightweight aluminum body and corrosion resistant fittings of brass, the Micro blow gun has no stuffing box or parts to wear out or replace. Flow of air can be regulated by trigger type button from a gentle puff to a full line pressure blast. Gun has a valve that can be quickly replaced and a hook for hanging. It is designed to fit the hand comfortably. Made by **Micro-Lathe-Plate Inc.**, Dept. 3, 1265 W. Second St., Cleveland 13, O.

For more details circle NED-208 D3 on enclosed inquiry slip

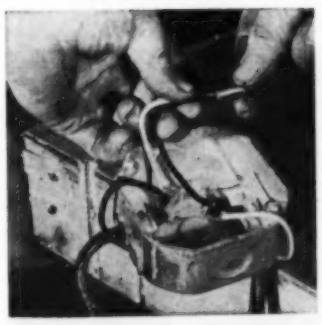
SEALED RECTIFIER
provides source of direct current



Hermetically sealed Power Capsule telegraph power supply consists of full-wave rectifier, line isolation transformer and metallized paper capacitors in a steel case. Intended for railroad use, unit furnishes 120-v dc at 150 milliamperes and operates from a 105-125-v 60-400-cycle single-phase ac line. Input and output connections as well as voltage adjusting transformer taps are brought out to a nine-pin moistureproof terminal header at the bottom of the capsule. Made by **Bogue Electric Mfg. Co.**, Railway Equipment Div., Dept. CP, 52 Iowa Ave., Paterson 3, N. J.

For more details circle NED-209 D3 on enclosed inquiry slip

ELECTRICAL CONNECTORS
spring type for pigtail splices



Tight permanent pigtail splices for single or multistrand wires up to 10-gage in more than 300 different combinations can be made with Scotchlok electrical spring connectors. They are easily applied without tools and will not shake loose. Coil spring connectors are made of zinc plated steel wire and are easily screwed on stripped wire ends with the fingers. A notched turning stem provides adequate leverage during application and is then snapped off to leave a splice with no sharp ends that adds little to the diameter of the wires. Made by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

For more details circle NED-210 D3 on enclosed inquiry slip

MILLIONS OF GALLONS OF LIQUIDS ARE ACCURATELY MEASURED EACH YEAR BY THESE . . .

. . . BOWSER XACTO METERS

Wherever precision measurement is essential to assure constant uniformity of product—control costs, or simplify handling of liquids—there you will usually find Xacto meters on the job.

Right now—in many plants of all types—Bowser Xactos are efficiently handling 662 different liquids.

It will pay you to consult with your nearby Bowser representative.

BOWSER, INC.

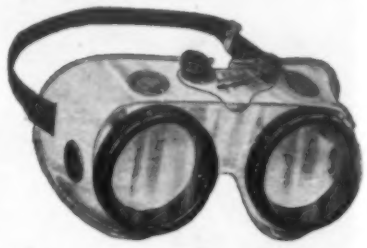
1381 Creighton Ave., Fort Wayne 2, Ind.

BOWSER Regional Offices • Atlanta • Chicago • Cleveland • Dallas • Kansas City • New York • San Francisco • Washington, D. C. • Hamilton, Ontario

For more details circle NED-211 D3 on enclosed inquiry slip

ONE-PIECE CLEAR PLASTIC "JUMBO" INDUSTRIAL GOGGLES

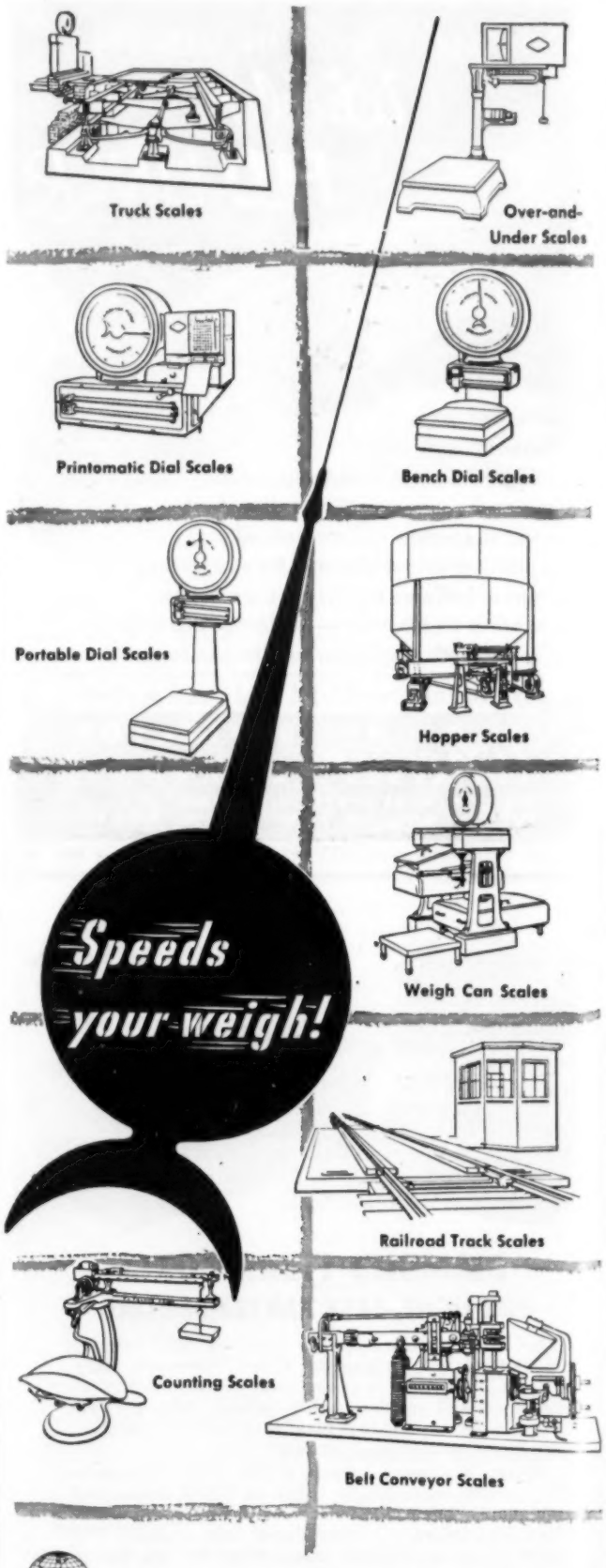
The illustration shows the new No. 612 Sellstrom Goggles, recently enlarged to "Jumbo" size, offering many highly desirable features.



(1) Inside measurement 5½", large enough to accommodate the largest of the present-day shell-rim prescription glasses. (2) The clear plastic frame permits wide vision. (3) One-piece construction, can be put on or taken off with one hand. (4) Exclusive patented feature permits quick adjustment to fit any face. (5) Rolled edges bearing on skin surface assures utmost comfort. (6) Perfectly balanced, weight evenly distributed. (7) Screen vents offer an abundance of continuous air circulation. (8) Light weight, only 2½ ounces without lenses. (9) Replaceable 50 m/m lenses of any desired quality.

These unusual "Jumbo" goggles are ideal for grinding, chipping, and all other operations offering an eye or face hazard. Priced very reasonably. Sold by the better dealers everywhere, or write direct. **Sellstrom Manufacturing Company,** 654 North Aberdeen Street, Chicago 22, Ill. *Advt.*

For more details circle NED-212 D3 on enclosed inquiry slip



FAIRBANKS-MORSE,

a name worth remembering

SCALES • DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS • HOME WATER SERVICE EQUIPMENT • RAIL CARS • FARM MACHINERY • MAGNETOS

For more details circle NED-213 D3 on enclosed inquiry slip

SPACE-SAVING LIGHTWEIGHT THERMOSTATS

The three skeleton thermostats described are particularly suited to control precisely liquid, gas and air temperatures on difficult applications where space is limited and light weight essential. They are available with ranges of 100° or 200° F., between limits of 0° and 425° F.

Type C41 may be used for either air or liquid temperature control. It is available for some applications, where extreme sensitivity is required, with a slotted bellows housing. It can be supplied with lock-out manual reset and with calibration.

Type C47 is especially adapted for liquid temperature control. It may be fitted with lock-out manual reset switches.

Type C48 is specifically designed for air temperature control. It may be supplied with slotted bellows housings for increased sensitivity and with lock-out manual reset switches.

Complete specifications for the Type C41, Type C47 and Type C48 are contained in Bulletin #2-2. Write for your free copy today.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▲ For more details circle **NED-214 D3** on enclosed inquiry slip ▲

If you move hot, abrasive materials in your operations, you'll do it faster and more economically with either a Simplicity Os-A-Veyor (oscillating type conveyor) or a Model PT Positive Action Conveyor. Simplicitys are ruggedly built for tough duty. Simple power units and operating mechanism mean low maintenance costs and easy servicing. Model PT conveyors, built in lengths of 100', can be installed in multiples to meet any level-operation requirement. Os-A-Veyor types, available in lengths to 30' and 12" to 6' widths, will operate on an incline depending on product being handled. Simplicity conveyors give positive rate of feed control and handle all kinds of material, regardless of temperature and abrasive characteristics, without damage. Write, wire, or phone . . . today.

92

Simplicity
ENGINEERING CO., DURAND, MICH.

▲ For more details circle **NED-215 D3** on enclosed inquiry slip ▲

THIS PLANT

Provides TOOLING and builds SPECIAL MACHINES

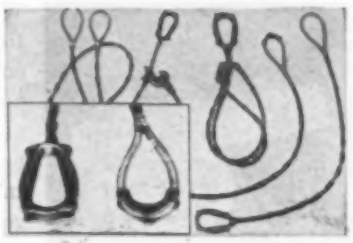
Thirty-four years of special machine and tool building has trained SEMCO tool-makers, engineers and skilled workmen—well able to most efficiently design, develop and build your new machinery and production equipment.

Write for a copy of our *Free Pamphlet—"Men, Machines and Equipment"*. It gives a practical answer to your tooling, special machine development and experimental problems.

SEMCO
SERVICE MACHINE COMPANY
INCORPORATED
202 MILLER STREET ELIZABETH, N. J.

▲ For more details circle **NED-216 D3** on enclosed inquiry slip ▲

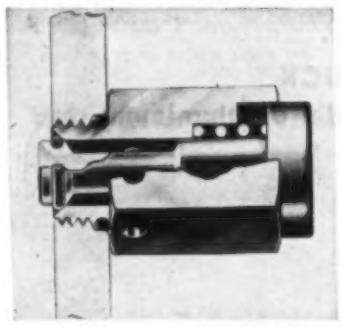
BRAIDED SLINGS
feature pin-lock thimble fittings



Reusable Pin-lock thimbles which are attached by pins are feature of these Red-Strand eight-part braided slings. Fittings replace conventional hammered-down clamps and are readily removable. Sling itself is new product and has been tested at 20 per cent "over-abuse" without showing undue wear. Made by **A. Leschen & Sons Rope Co.,** Dept. N, 5909 Kennerly Ave., St. Louis 12, Mo.

▲ For more details circle **NED-217 D3** on enclosed inquiry slip ▲

PRESSURE RELEASE VALVE
allows rapid escape of air



Designed to allow rapid escape of air pressure in systems, bleeding air from fluid systems and similar uses, manually operated release valve has only four working parts. Design assures dead-tight sealing and has 9/16-in.-18 threads which permit normal installation with either an O-ring, as shown, or with gasket seal. Valve is held tightly closed by spring when manual pressure is released. It is pressed to open and released to close. Made by **James-Pond-Clark,** 2183 E. Foothill Blvd., Pasadena 8, Calif.

▲ For more details circle **NED-218 D3** on enclosed inquiry slip ▲

METAL CONTAINER
reusable type with cushioning

Offered as a packaged unit, reusable metal containers have cushioning materials such as molded foam rubber, Co-Ro-Tex, wrapped Kapak or die-cut Tufflex. Designed to meet specialized product requirements, the container - and - cushioning unit can be used for all method "D" packaging under specification MIL-P-116A, interior container MIL-C-6055 and exterior container MIL-C-6054A. Cushioning materials are formed to fit the weight and dimensions of the product to be packaged. Made by **Greenwood Packaging Supply Co.,** Dept. NED, 859 Summer Ave., Newark 4, N. J.

▲ For more details circle **NED-219 D3** on enclosed inquiry slip ▲

this has a **BEARING** on the subject

Over 90% of our customers have come back again and again over the past 22 years for additional help on their lubrication problems.

HERE'S WHY . . .

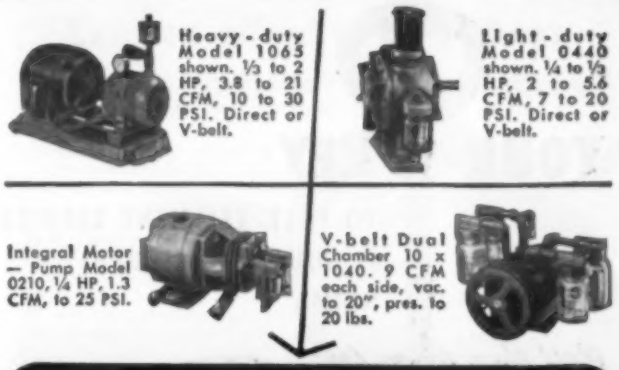
- Our files are full of testimony to the substantial dollar savings effected by a Trabon oil or grease system.
- The Trabon system is completely sealed and works equally well buried in dust, dirt and grime, ice, steam or under any other difficult operating condition.
- The Trabon system is *positive*. Each feeder delivers the proper amount of lubricant to the bearing before moving on to the next one.
- A single indicator at the pump tells the complete story of the lubricating cycle.

The long list of satisfied repeat customers we have are the best reason why there are more Trabon Automatic Lubrication Systems in industry than all other makes. We'll be glad to give you their names. Or, Bulletin 529 will provide you with more information.

Trabon Automatic Lubrication Fits Any Bearing Situation.

Trabon ENGINEERING CORPORATION
1814 E. 40th STREET • CLEVELAND 3, OHIO
Oil and Grease Systems

▲ For more details circle **NED-220 D3** on enclosed inquiry slip ▲



better appearance . . . performance
→ FOR YOUR PRODUCTS with GAST AIR COMPRESSORS

Offer your customers better performance, better appearance! Specify Gast rotary-vane Air Compressors as original equipment where compressed air of 10 to 30 lbs. is needed. Select from 1.3 to 24 CFM range — numerous combinations. Precison built; integral-motor, V-belt or direct drive models; standard accessories.

Investigate! See why Gast Air Compressors give you specific advantages for aerating, atomizing, blowing, liquid displacing, etc.

Write for Catalog and Application Ideas Booklet!

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY AIR MOTORS · COMPRESSORS · VACUUM PUMPS (TO THREE H.P.) (TO 30 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

▲ For more details circle **NED-221 D3** on enclosed inquiry slip ▲

Just 1/32" (pinhole size) faucet leak
MUSHROOMS into ATOMIC WASTE
of approximately 95,000 gallons*
of water yearly—costing:
$24.14
@ $1.90 per M cubic feet

If a hot water faucet, then actual FUEL WASTED heating 95,000 gallons costs approximately:
$88.91 if coal (9679 lbs.) †
$91.08 if oil (792 gals.) †
$84.41 if gas (84,411 cu. ft.) †

Above figures authenticated by Hackensack Water Co.* and American Gas Association. †

STOP this needless WASTE during today's MATERIAL and MANPOWER shortages with 'SEXAUER' "Easy-Tites" that outwear ordinary faucet washers 6-to-1, thus SAVING labor on 5 REPEAT repairs, PLUS water and fuel, while prolonging the life of SCARCE fixtures.

PAT'D.
"EASY-TITE" Faucet washers

...a modern laboratory triumph, are compounded from du PONT NEOPRENE (tested up to 300°F.) instead of rubber—to withstand DESTRUCTIVE HEAT common in present-day superheating water systems—that formerly broke down washer's structure.

Built like a tire with fabric re-inforcement

they resist the grinding, closing squeeze that SPLIT and MUSH ordinary washers out of shape...causing LEAKS.

Through combining NEOPRENE and FABRIC RE-INFORCEMENT they OUTWEAR ordinary washers 6-to-1 on hot or cold FAUCETS—thus you slash water, fuel and labor costs.

THE NEW 'SEXAUER' CATALOG,
Edition G, just out pictures over 2500 TRIPLE-WEAR plumbing REPAIR parts and Pat'd. Precision Tools. It's today's accepted buying guide for discriminating purchasing and maintenance personnel among thousands of top PLANTS, INSTITUTIONS and GOVERNMENT AGENCIES that rely on SEXAUER repair materials. *Send for your copy today!*

Then too, there's a SEXAUER TECHNICIAN within quick call from coast-to-coast, who offers a special SURVEY service that sets up a schedule of the exact replacement parts required for your particular plumbing fixture regardless of make or age and *without obligation.*

A postcard will bring him and your NEW Catalog promptly.
J. A. SEXAUER MFG. CO., INC., Dept. AU-43,
2503-05 Third Avenue, New York 51.

as advertised in **THE SATURDAY EVENING POST**

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

▲ For more details circle **NED-222 D3** on enclosed inquiry slip ▲

▲ For more details circle NED-223 D3 on enclosed inquiry slip ▲

GEAR USERS!

What causes NOISY GEARS? GEAR FAILURES?

Send for this FREE FOLDER! It gives the answers . . . shows how you can eliminate these troubles with

Sier-Bath PRECISION GEARS

Proven accuracy where required!

Sier-Bath Gear & Pump Co., Inc.
9268 Hudson Blvd., North Bergen, N. J.
Established 1905 Member A.G.M.A.
Also mfrs. of Flexible Gear Couplings...Screw, "Gearex" and "Hydrex" Rotary Pumps
▲ For more details circle NED-224 D3 on enclosed inquiry slip ▲

BELLOWS SELECTION RULE
calculates life, pressure, stroke

When this bellows selecton slide rule is used in conjunction with table booklet, bellows life, permissible pressures and permissible stroke can be calculated. Rule has conventional C and D slide rule scales, decimal equivalents from 1/64 to 1 and areas of circles covering same range. There is also table showing number of cycles per day, week, month and year if frequency per second is known. Rule also provides 6-in. scale and metric scale up to 15.2 cm. Included in package is set of templates for tracing desired bellows and incorporating it into engineering drawing. Complete package sells for $1. Made by **Clifford Mfg. Co.**, 124 Grove St., Waltham 54, Mass.

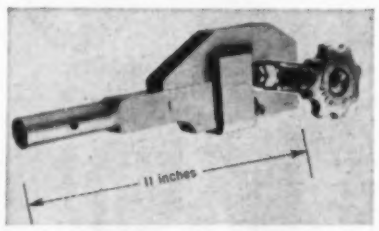
▲ For more details circle NED-225 D3 on enclosed inquiry slip ▲

4-WHEEL HAND TRUCK
heavy duty model of aluminum

Cast aluminum rounded corners, Timken bearings and permanently lubricated caster and wheels are among design features of this light weight aluminum handling truck. It is available in capacities up to 6000 lb. A 24 x 48-in. truck, weighing under 57 lb, can carry up to 2000 lb. Truck bed is flexible in torsion. Made by **Tobey Mfg. Corp.**, 1222 El Segundo Blvd., El Segundo, Calif.

▲ For more details circle NED-226 D3 on enclosed inquiry slip ▲

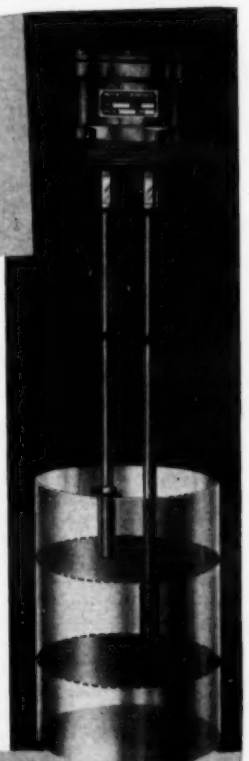
ADJUSTABLE VALVING WRENCH
for inserting valves in cylinders



One man, using this adjustable valving wrench, can insert or remove high pressure cylinder valves or bottled gas valves from cylinders. Made of case-hardened alloy steel, its handle can be fitted with either of two jaws, one adjustable from 15/16 to 1 3/16 in. and the other from 1 3/16 to 1 7/16 in. Secure grip is accomplished by sliding the movable jaw along the handle. Use requires attachment of a 1-in. steel pipe extension, length of which governs amount of torque applied. Made by **Superior Valve & Fittings Co.**, 1501 W. Liberty Ave., Pittsburgh 26, Pa.

▲ For more details circle NED-227 D3 on enclosed inquiry slip ▲

NOW! Accurate Level Control with NO Maintenance!



Photoswitch Electronic Liquid Level Controls have no vacuum tubes — no floats — no moving parts to wear out. So you are sure of accurate level indication and control . . . maintenance-free for unlimited life. Electrolysis is eliminated — probe voltage is less than ½ volt A.C.
UNIVERSAL: pump up — pump down — low level — high level! Two probe rods are suspended into a tank or vat of any size. For a typical pump-up operation: When liquid level falls below lower probe, the control switches on pump motor; when liquid touches upper probe, control shuts off motor. Learn more about this money-saving process control — write for Liquid Level Control Bulletin NA 4.

PHOTOSWITCH INCORPORATED
77 Broadway, Cambridge 42, Mass.
Offices in all principal cities
▲ For more details circle NED-228 D3 on enclosed inquiry slip ▲

THE HEAT-TREATED ELECTRIC FURNACE STEEL SHOT

SOLID TOUGH UNIFORM EFFICIENT

lasts longer
causes less wear
cleans faster
gives lowest cleaning cost

Send today for Bulletin 89

American WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St., Mishawaka, Indiana
▲ For more details circle NED-229 D3 on enclosed inquiry slip ▲

WATSON-STILLMAN
HYDRAULIC POWER TOOLS FOR INDUSTRY

Send for your copy of Bulletin A-5 . . . It's Free.

WATSON-STILLMAN FITTINGS DIVISION
H. K. PORTER COMPANY, INC.
Roselle, New Jersey
▲ For more details circle NED-230 D3 on enclosed inquiry slip ▲

Here's BIG HELP IN TERMINAL WIRING!

The correct wire to correct terminal every time!

The New JONES FANNING STRIP

Connections are made through Fanning Strip, on bench or anywhere apart from barrier strip, and quickly slipped into assembly.

Designed for use with Jones Barrier Terminal Strips Nos. 141 and 142, for 1 to 20 terminals.

9-141 Barrier Strip

Simplifies and facilitates soldering. Insures positive correct connections. Saves time. Ideal for harness or cable assembly. Strong construction: Brass terminals, cadmium plated. Heavy bakelite mounting.

9-161 Fanning Strip. Pat. applied for.

Send for complete data on this new basic improvement!

Jones HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.
▲ For more details circle NED-231 D3 on enclosed inquiry slip ▲

AERO-SEAL WORM-DRIVE HOSE CLAMPS

WON'T SHAKE LOOSE!

Wherever you have to clamp a hose connection tight . . . or wherever you want to lock two objects of any shape together in an unshakeable bond . . . your best bet is AERO-SEAL.

Threads of steel worm engage deep into slots in stainless steel band—hold tight under extreme vibration in automotive, aircraft and industrial applications. CAN'T SHAKE LOOSE.

Use of stainless steel subject to government regulations

One-Hand Installation

Install an Aero-Seal any place you can reach with thumb and one finger. Self-feeding when band engages worm threads. Thumb-grip and screwdriver types.

Re-use Again and Again

When hose is worn you RE-USE the same Aero-Seal again and again. RE-USE Aero-Seals on temporary clamping jobs—they conform to any shape without damaging band.

"Aero-Seal" WORM DRIVE HOSE CLAMPS

ANOTHER BREEZE MARK PRODUCT

BREEZE CORPORATIONS, INC.
41 South Sixth St. Newark, N. J.

For more details circle NED-232 D3 on enclosed inquiry slip

M&M air fluff paper shredder

The Air-Fluff Paper Shredder is used for the commercial manufacture of paper excelsior. Also speedily, safely and efficiently destroys blueprints, letters and confidential records. Built in 3 sizes ranging in capacity from 200 to 2500 pounds per hour. Each machine can be adjusted to cut widths of 1/8", 3/16", 1/4", or 3/8". Write for descriptive literature.

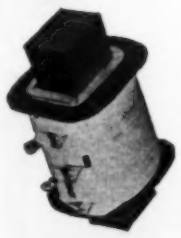
mitts & merrill
1000 South Water • SAGINAW, MICHIGAN

61

For more details circle NED-233 D3 on enclosed inquiry slip

NATIONAL VULCANIZED FIBRE

contributes to an improved product—universal coil forms for Cutler-Hammer, Inc.



In the manufacture of wire spools, Cutler-Hammer, Inc. uses formed pieces of tough National Vulcanized Fibre possessing exceptionally high dielectric strength. The form is expandable to conform to cores of various sizes. This application is typical of the many uses National Vulcanized Fibre has in the electrical field.

National Laminated Plastics
nationally known—nationally accepted

NATIONAL VULCANIZED FIBRE — A tough, horn-like material with high dielectric strength. Excellent machinability. Sheets, Rods, Tubes, Special Shapes.

PHENOLITE Laminated PLASTIC — Good electrical insulating material with great mechanical strength; moisture resistant. Sheets, Rods, Tubes, Special Shapes.

NATIONAL VULCANIZED FIBRE CO.
Wilmington, Delaware — Offices in Principal Cities
Since 1873

For more details circle NED-234 D3 on enclosed inquiry slip

LIGHTWEIGHT FOLDING CHAIRS are constructed of aluminum

Reported to be 35 percent lighter in weight than steel chairs, aluminum folding chairs are easy to handle. They fold flat for compact storage. Variations of construction include aluminum frame with steel seat and back, aluminum frame with cane steel seat and back, and aluminum frame with pressed wood over steel seat and steel back. Steel seats and backs are finished in walnut or taupe baked enamel, while aluminum frame has clear baked varnish finish. Made by **Lyon Metal Products, Inc.**, 324 Clark St., Aurora, Ill.

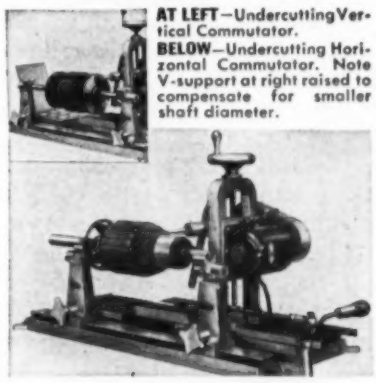
For more details circle NED-235 D3 on enclosed inquiry slip

WELDING ELECTRODE for piping and fabrication work

Suitable for such applications as power piping, barge and tugboat construction, tank and cylinder fabrication, and joining plates of various thicknesses, improved grade E-6010 electrode is Murex type R. It has minimum of spatter, uniformity of arc behavior, lack of spearing, ability to take high currents without coating breakdown or change of performance as it is consumed, penetration without undercutting and no reaction pitting when using whip technique. Made by **Metal & Thermit Corp.**, 101 E. 41st St., New York 17, N. Y.

For more details circle NED-236 D3 on enclosed inquiry slip

COMMUTATOR UNDERCUTTER is bench type power machine



AT LEFT—Undercutting Vertical Commutator.
BELOW—Undercutting Horizontal Commutator. Note V-support at right raised to compensate for smaller shaft diameter.

Both horizontal and vertical commutators can be undercut with this model HV-3 undercutter. It handles a wide variety of commutator sizes and shaft lengths in range to 6½-in. diameter by 6½-in. length. Maximum between-center distance is 20 in., with one center being spring loaded or locked for heavy work. V-supports with 1-in. vertical adjustment are provided for longer shafts and up to 12-in. diameter armatures. Made by **Martindale Electric Co.**, 1387 Hird Ave., Cleveland 7, O.

For more details circle NED-237 D3 on enclosed inquiry slip

See How OTHERS Cut Cost with MULTIPRESS

Facts and figures from hundreds of actual users tell *how* the smooth oil-hydraulic power and control of Multipress cuts production costs. Our Data Log reports on these applications may answer some of your own production needs.

Multipress offers fully adjustable *ram speed, pressure and stroke length.* Pressures build up as the ram contacts work . . . *no hammer-blow impact.* Automatic time delay, for ram dwell, and many other types of ram controls, auxiliary feeds, accessories and attachments can be provided with Multipress.

Let us send you DATA LOGS on types of operations your work requires!

The DENISON Engineering Company
1151 Dublin Road, Columbus 16, Ohio

MULTIPRESS®

For more details circle NED-238 D3 on enclosed inquiry slip

Can you afford to be without corrosion-resistant thermometers?

Production errors caused by thermometer failures can be mighty costly.

The corrosion-resistant, pressure-tight construction of Rochester dial thermometers saves you this sort of expensive trouble. And it practically doubles the life of the thermometer under severe operating conditions.

An exclusive stainless steel welding process bonds case, stem and nut into a single corrosion-resistant unit.

RECALIBRATE ON THE JOB

• Rochester dial thermometers are built to stay accurate under rough treatment. But if an unusually hard blow knocks the pointer out of adjustment, you can recalibrate it quickly and easily by turning a single screw.

You can order money-saving Rochester thermometers from one of our specialized instrument representatives, listed in Sweet's Catalog or the yellow pages of your telephone directory. Or write us direct for further details. ROCHESTER Manufacturing Company, Inc., 114 Rockwood Street, Rochester 10, New York.

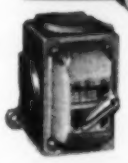
MILLIONS of Rochester Dial Thermometers are now delivering dependable service

Rochester MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS · GAUGES · AMMETERS

For more details circle NED-239 D3 on enclosed inquiry slip

R&S Receptacles Plugs and Switches

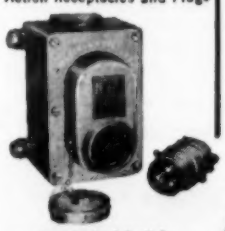
Type FS—Waterproof Receptacles and Plugs



Type FS—Waterproof Switches

Angle Type Plugs and Receptacles

Explosion-Proof Delayed Action Receptacles and Plugs



Interlocked Switch Receptacles and Plugs

—first line of defense against weather, water and industrial hazards!

R&S receptacles, plugs, connectors and switches are available in an endless variety of weatherproof, waterproof and explosion-proof types, sizes and assembly combinations—the most complete line of fittings ever made to meet every industrial operating requirement.

Russell & Stoll quality adds maximum permanency and protection to your wiring plans.

Write for literature concerning items in which you have a specific interest.

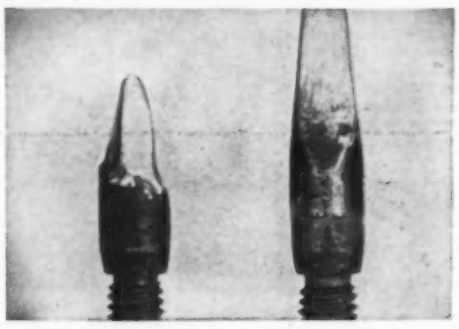
Ever-Lok Plugs and Receptacles

RUSSELL & STOLL COMPANY, INC. • 125 BARCLAY STREET, NEW YORK 7, N. Y. C11

RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

For more details circle NED-240 D3 on enclosed inquiry slip

Reduce Maintenance of Soldering Iron Tips



Save money on soldering iron maintenance! No filing of tips needed—G-E Ironclad copper tips have a layer of iron on the working surface which *retards* pitting and corrosion. Both tips above were used 363.5 hours at 250 C. Plain copper tip (left) pitted but Ironclad tip retained its original form, ready for many more hours of use—and still no filing will be needed.

Write For Free New Bulletin GEA-4519C to Section 720-95, *General Electric Company, Schenectady 5, N. Y.*

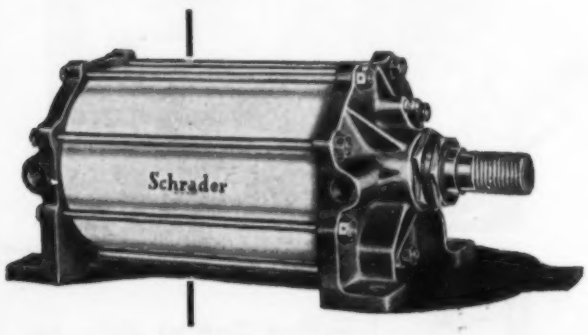
GENERAL ELECTRIC

For more details circle **NED-241 D3** on enclosed inquiry slip

The Best Muscles in Your Plant

This compact, powerful Schrader Air Cylinder can eliminate costly mechanical movements . . . tiring, slow manual labor . . . space wasting mechanisms in many spots on your production machines. Leg mounted cylinders, shown here, will deliver a powerful push, pull, or push and pull, parallel to the mounting surface.

Cylinder action can be controlled manually or automatically. Speed, force and cycle time are all readily controlled by Schrader operating valves and accessories. Schrader cylinders are available in any type of mounting up to 8 inch bore in any stroke. Full details are in the Schrader catalog. Write for it today.



A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Incorporated

459 Vanderbilt Ave., Dept. E-34, Brooklyn 38, N. Y.

For more details circle **NED-242 D3** on enclosed inquiry slip

NEW SLIDE CHART

gives you information on

- **BENDING RADII**
- **COIL DIAMETERS**

for Carpenter stainless tubing and pipe from ⅜" to 5" O.D.

Just send us a note on your company letterhead or return the coupon below and your chart will be mailed promptly.

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, N. J.

Please send me the Carpenter Bending & Coiling Slide Chart.

NAME_____ TITLE_____
(Please Print)

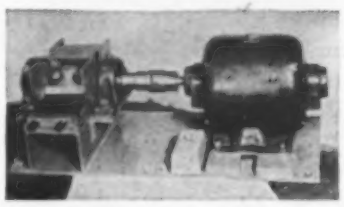
COMPANY_____

ADDRESS_____

CITY_____ ZONE____ STATE_____
(Firm name and title must be on coupon)

For more details circle **NED-243 D3** on enclosed inquiry slip

METAL STRIP CUTTER
for use with slitting machines



Metal edge trims are cut into scrap lengths suitable for removal by crane or other means after they come from the slitting machines by this small motor driven cutter. Cutters are usually used in tandem, one on each side of the slitter, and operated by a single shaft and one small motor, but each cutter can have an individual motor. Speed of the cutter is fixed, so that length of cut is determined by the slitter speed. Made by **Taylor, Stiles & Co.,** 7 Bridge St., Riegelsville, N. J.

For more details circle **NED-244 D3** on enclosed inquiry slip

HYDRAULIC ASSEMBLY PRESS
maintains center distance accurately

Specifically designed for maintaining center distances in assembling inner portions of fluid couplings, this 50-ton hydraulic assembly press is extremely accurate. Ram on the press is set with an indicator, the stroke being electrically and hydraulically controlled. This production machine is made by **Turner Bros., Inc.,** 2626 Hilton Rd., Ferndale, Mich.

For more details circle **NED-245 D3** on enclosed inquiry slip

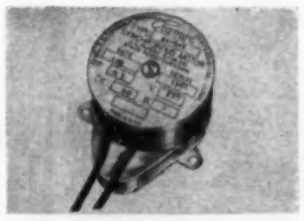
TAMPERPROOF COCK
made in ¾ to 1½-in. sizes

Lubricated tamperproof service cock, rated at a working pressure of 125 psi is available in sizes from ¾ through 1½ in. Tampering is resisted by a drive screw which prevents removal of the stop collar and a blind drive pin in the adjustment collar at the lower end of the plug which holds the collar fast. Two grooves connected to annular grooves above and below the plug ports carry lubricant film to all areas of the seating surface for a positive seal with cock open or closed. O-rings at upper and lower ends of the plug provide additional insurance against leakage. Made by **Rockwell Mfg. Co.,** Dept. NED, 400 N. Lexington Ave., Pittsburgh 8, Pa.

For more details circle **NED-246 D3** on enclosed inquiry slip

Cramer TIMING DEVICES

SYNCHRONOUS TIMING MOTORS STOP AND START *INSTANTLY!*



CHECK THESE OUTSTANDING *FEATURES...*

- **Instantaneous Response**
- **30-Inch Ounces Torque at 1 R. P. M.**
- **Runs Only at Synchronous Speed**
- **Runs Equally Well in Any Position**
- **Controlled Rotation or Dual Rotation**
- **Replaceable Coils**
- **One- or Two-Way Friction**

Write for Cramer Timing Device Catalog or specify Bulletin No. 10A for complete information on the Model SX Motor.

the R. W. CRAMER COMPANY
BOX 28, CENTERBROOK, CONN.

3CRBB

For more details circle **NED-247 D3** on enclosed inquiry slip

standardize on standard

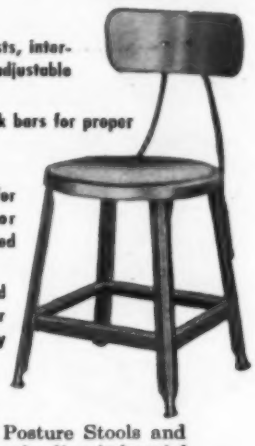
HALLOWELL

POSTURE STOOLS AND CHAIRS

designed for comfort while working

LOOK AT THESE FEATURES

- Posture back rests, interchangeable and adjustable
- Spring steel back bars for proper posture
- Seats designed for comfort, plain or Presdwood covered
- Angle braces and angle legs for strength and rigidity



This and other HALLOWELL Posture Stools and Chairs are stocked and sold by leading industrial distributors. Write for literature. SPS, Jenkintown 24, Pa.

Our Fiftieth Year : A START FOR THE FUTURE

HALLOWELL SHOP EQUIPMENT DIVISION

SPS
JENKINTOWN PENNSYLVANIA

For more details circle **NED-248 D3** on enclosed inquiry slip

THE LITTLE BIG SHOT IN PLASTICS!

Small but powerful . . . the **LEWIS "4"** is the lowest cost machine available today for production molding of lightweight large-area parts. Only the **LEWIS "4"** can mass produce 2 to 3-ounce parts in molds originally designed for 8-ounce machines. It's compact . . . simple to operate . . . economical to buy and use.

The **LEWIS "4"** features semi-automatic operation, multiple shot injection and full-mold high-pressure injection at low plunger pressures. Exclusive fast-opening crank-operated die-lock mechanism permits operator to release dies and clear jammed nozzles in 20 seconds or less without leaving the operating panel.

The **LEWIS "4"** handles almost any molding material and accommodates molds up to 12x23" mounted vertically and 13⅜x20", horizontally . . . yet it requires only 16 sq. ft. of floor space and operates so quietly you can use it anywhere.

Dollar for dollar, the LEWIS "4" gives you more!

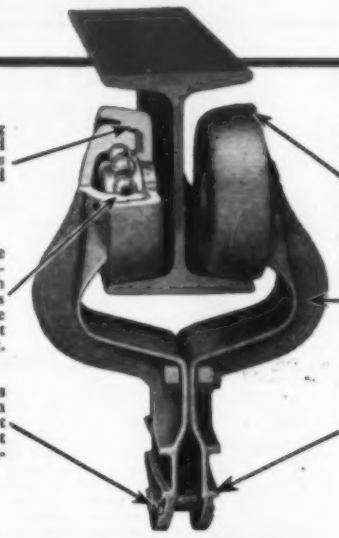
Write today for illustrated Catalog No. 101 for additional details.

1094-LW

LEWIS THE LEWIS WELDING & ENGINEERING CORPORATION
14 INTERSTATE STREET • BEDFORD, OHIO

For more details circle **NED-249 D3** on enclosed inquiry slip

Your conveyor dollars go farther with LINK-BELT trolleys



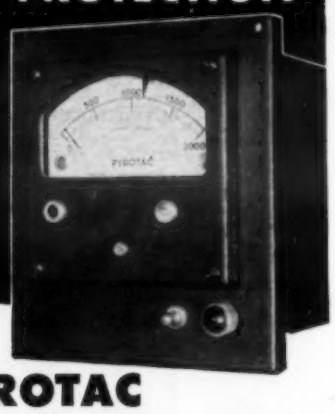
LINK-BELT

LINK-BELT COMPANY: Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8.

Write for Folder 2241-B.

For more details circle NED-250 D3 on enclosed inquiry slip

AUTOMATIC PROTECTION OR CONTROL for your heating process



...WITH

ALNOR PYROTAC

Here's a simple, low-cost way to obtain *AUTOMATIC PROTECTION* against damage due to excessive temperatures . . . safeguard your investment in heating equipment and materials in process. This precision-built instrument constantly indicates temperature of the heated equipment and sounds an alarm and/or shuts down the heated circuit at a safe, pre-set temperature. It may also be used as a *CONTROLLER* on a process requiring shutdown upon reaching a final process temperature—such as ceramic kilns, molds, etc. Automatic thermocouple break protection assures safety if couple or extension wires should break.

Ask your Alnor representative for details on this sturdy, precise instrument. You'll find the price of less than a hundred dollars unusual for an instrument of this type. Write for bulletin that contains complete description and wiring diagrams of actual applications. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-251 D3 on enclosed inquiry slip

RIGHT AT THE SOURCE OF WASTE

For this 15 hp motor, power losses are corrected where it does the most good—*at the source.* A 4 kvar Sprague Power Factor Correction Capacitor across the terminals reduced reactive circuit current flow through transformers and wiring to a bare minimum . . . slashed power bills noticeably.

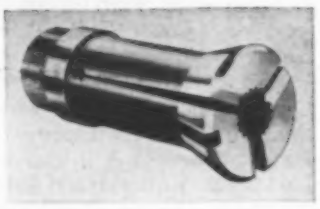
Sprague Unit-Cell Capacitors make it unnecessary to buy even one kvar more than you need. Write for the Sprague free guide of cost-saving suggestions, No. 50B.

SPRAGUE SPRAGUE ELECTRIC COMPANY 183 Marshall St., North Adams, Mass.

PIONEERS IN ELECTRIC AND ELECTRONIC DEVELOPMENT

For more details circle NED-252 D3 on enclosed inquiry slip

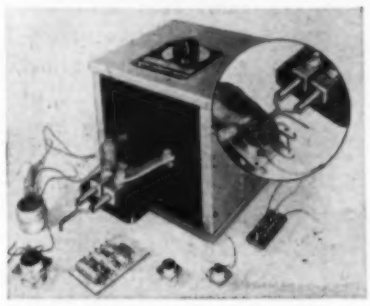
SELF-CLEANING COLLET for use in rotating spindles



Coolants and cutting oils, along with the solids they pick up, are prevented from collecting in collet slots and clogging collet and chucking and feeding mechanisms of this self-cleaning collet. Inclined planes on the following edge of each slot face act as fan blades which forcibly repel foreign matter. This feature is available on all collets made by this company if specified by the customer. Made by **Sheffer Collet Co.,** Bay & Wayne Sts., Traverse City, Mich.

For more details circle NED-253 D3 on enclosed inquiry slip

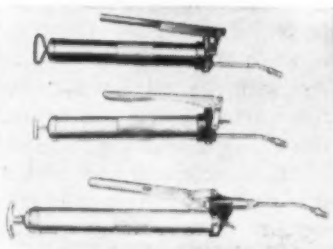
CONNECTOR SOLDERING UNIT also usable on electrical work



From 2 to 30 or more terminals can be produced from AN connectors by this 250-w connector soldering machine. It is also usable for soldering terminal boards, printed circuits with high-temperature solders and producing solder-crimped lugs to government specifications. In use, operator selects the desired heat by dial adjustment, brings the work to the electrodes and presses the foot switch. Small electrodes can reach relatively inaccessible places. Made by **Joyal Products, Inc.,** 56A Belmont Ave., Newark 3, N. J.

For more details circle NED-254 D3 on enclosed inquiry slip

LEVER TYPE GREASE GUNS hold large amount of lubricant



Holding 40 to 100 per cent more lubricant than conventional guns, giant-size lever type grease guns speed industrial lubrication. Guns are filled readily with the Lincoln Filler Pump or by suction. Line includes two 21-oz capacity guns which develop pressures to 10,000 psi, 32-oz unit for up to 4300 psi, and 32-oz gun for pressures to 10,000 psi. All have long hydraulic coupler extension for contacting hard-to-reach fittings and filler nipple. One 21-oz model is finished in gunmetal blue lacquer and others are nickel plated. Made by **Lincoln Engineering Co.,** 5782 Natural Bridge Ave., St. Louis 20, Mo.

For more details circle NED-255 D3 on enclosed inquiry slip

SPEED UP SMALL PARTS ASSEMBLY

Parts feed automatically toward front—end reaching and fumbling.

Bins taper toward front to form convenient semicircle—keep all bins within easy reach.

Stacking, locking construction for rigid set-ups, easily changed when necessary.

All-welded construction. Smooth, folded edges.

New-design, adjustable hoppers provide increased capacity and permit regulated flow of parts according to sizes and weights.

Two-sizes—tapered or straight sides.

IMMEDIATE DELIVERY

Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main Street, Pawtucket, R. I.

STACKBIN SYSTEM "Stacked and Still Accessible"

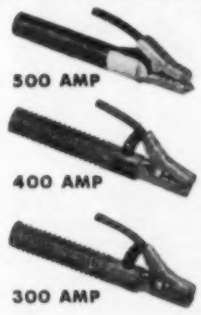
For more details circle NED-256 D3 on enclosed inquiry slip

...its Cooler

THE PROOF IS RIGHT IN THE PALM OF YOUR HAND

CADDY® ELECTRODE HOLDER

FULLY INSULATED MODELS



OTHER MODELS ON REQUEST!

FEATURES:

- CADWELD connection—cable to jaw is a 100% conductivity solid copper connection. It is permanent—cannot melt out, burn out, loosen or corrode.
- Short completely replaceable beryllium copper jaw has 80% conductivity.
- Lightweight durable steel body carries no current.
- Cable gripper prevents broken strands and flexing at the connection.
- Operator's hand is over fully insulated cable, air space and handle ribs.
- Fiberglass spring cover withstands 1200° F. heat radiation from the arc.
- NO Shocks—Handle screws eliminated.
- Replaceable fiberglass insulators.

"CADDY" ARC WELDING ACCESSORY DIVISION
ERICO PRODUCTS, INC. • 2070 E. 61st PLACE • CLEVELAND 3, OHIO

For more details circle NED-257 D3 on enclosed inquiry slip

ANOTHER PROBLEM SOLVED WITH *Pliobond*

Plywood hulls of ocean-going boats made by Jeffries Boat Works, Venice, California, are coated with PLIOBOND to protect and seal the wood.

PROTECTION-PLUS for this OCEAN-GOING BOAT HULL

Undercoated with PLIOBOND before antifouling paint is applied, the hull of this ocean-going boat is protected against deterioration. The PLIOBOND coat seals the plywood hull, protects the plywood, holds the bottom paint with a strong, lasting bond. And as the paint wears away, the PLIOBOND provides lasting protection to the hull—preventing rapid deterioration.

This application of PLIOBOND is an example of the great endurance you get when all your bonding is done with PLIOBOND—Goodyear's use-proved thermoplastic adhesive. It gives effective resistance to salt water, weathering, chemicals, stress, strain and shear—can literally be used to "bond anything to anything."

Write for full details today to:

Goodyear, Chemical Division
Akron 16, Ohio

CHEMICAL GOODYEAR DIVISION

Use Proved Products

CHEMIGUM • PLIOBOND • PLIOLITE • PLIOVIC • WING-CHEMICALS

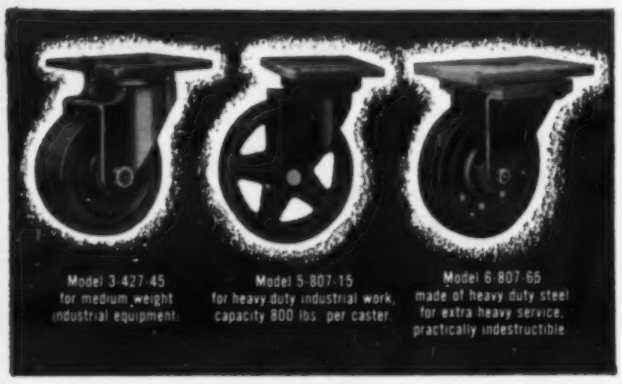
The Finest Chemicals for Industry

Chemigum, Pliobond, Pliolite, Pliovic—T.M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-258 D3 on enclosed inquiry slip

FAST... EFFICIENT materials-handling with Colson casters

There's a COLSON Caster designed to meet every industrial materials-handling requirement—*exactly*. Old, bumpy hard-to-handle equipment can be restored to its original efficiency quickly and economically with COLSON Casters. Other COLSON materials-handling equipment includes hand trucks, barrel and drum trucks, platform trucks and lift-jack systems. Write us or consult the yellow pages (under "Casters" or "Trucks, industrial") for the COLSON office near you.



Write for new catalog "COLSON Trucks and Casters"

THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS · LIFT-JACK SYSTEMS · INDUSTRIAL TRUCKS

▲ For more details circle **NED-259 D3** on enclosed inquiry slip ▲

You Just Can't File Away These Problems...

BLAST CLEANING

...of bridges, buildings, tanks, structural work

Pangborn Blast Cleaning Machine—Cleans tanks, bridges, structures quickly and economically. Ideal for maintenance and other jobs, such as removal of dirt, rust, etc. Six sizes, stationary or portable, **$170** and up.

...of small castings, forgings, stampings, heat treated parts,

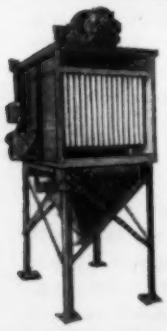
Pangborn Blast Cabinet—Saves time and money in cleaning small metal parts, removing rust, scale, grime, old paint, etc., in a few seconds. Perfect for producing clean, smooth surfaces on pieces 60" x 35" in size. Models from **$319** and up.

PRECISION FINISHING

...of molds, dies, tools

Pangborn Hydro-Finish Cabinet—Removes scale and directional grinding lines . . . holds tolerances to .0001" and prepares surfaces for painting or plating. Liquid blast reduces costly hand cleaning and finishing of molds, dies, tools, etc. Models from ..... **$1410** and up.

CONTROLLING DUST



...at the source of origin

Pangborn Unit Dust Collector—Traps dust at the source. Reduces maintenance costs . . . keeps plant clean and improves community relations. Allows reclamation of valuable material. Models from ..... **$286** and up.

BUT YOU CAN MAIL THIS COUPON TO PANGBORN FOR HELP IN SOLVING THEM!

Pangborn

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment

☐ Blast Cleaning Cabinets
☐ Blast Cleaning Machines
☐ Unit Dust Collectors
☐ Hydro-Finish Cabinets

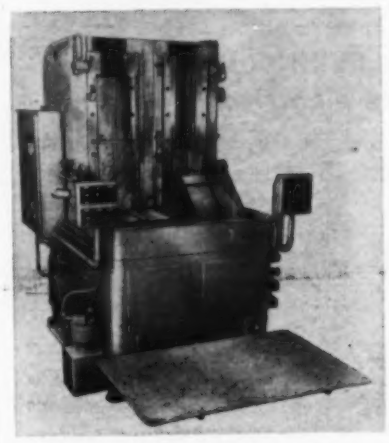
PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.
Gentlemen: Please send me more information on the equipment I've checked. To be used for.....
.....
Name .....
Company .....
Address .....
City .....Zone....State.....

▲ For more details circle **NED-260 D3** on enclosed inquiry slip ▲

IMPORTANT

If you have not returned one of our regular questionnaires or sent us an inquiry during the past year, will you please fill in the coupon at the bottom of the inquiry slip in this issue and return it to us? No postage is required. The Controlled Circulation Audit, to which we belong, requires that we verify each name on our mailing list regularly. Therefore, if you want to continue receiving NEW EQUIPMENT DIGEST each month, you must send us an inquiry slip or return the circulation questionnaire which is sent to you.

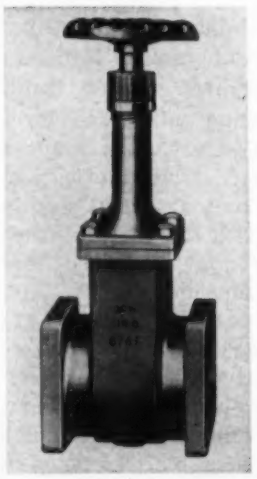
SURFACE BROACHING MACHINE
has 30-in. stroke, 4-ton capacity



Added to line of surface broaching machines, this standard SBD-30-4 dual ram unit has 30-in. stroke and 4-ton capacity. Short stroke and light tonnage make machine practical for surface broaching of small parts at high production rate. Tilting work tables provide convenient loading positions for parts. Machine cycle can be either automatic or semiautomatic. Electrical and hydraulic circuits conform to JIC standards. Made by **American Broach & Machine Co.,** 413 W. Huron St., Ann Arbor, Mich.

▲ For more details circle **NED-261 D3** on enclosed inquiry slip ▲

GATE VALVE
engineered for tight closure



Light weight is obtained in this No. 676-F gage valve by use of Opalumin alloy flanged body with bolted bonnet. Interior parts are machined bronze. Self-aligning, taper seating, double ball and socket disks seal against lapped renewable bronze seat rings which are threaded and seated against shoulder. Compound double-acting threads allow close clearance when valve is open, and minimize number of turns required to open or close the valve. Large stuffing boxes are used in valves which are available in 3-in. size. Made by **OPW Corp.,** Dept. NED, 2735 Colerain Ave., Cincinnati 25, O.

▲ For more details circle **NED-262 D3** on enclosed inquiry slip ▲

NEW SBS WATERLESS WASHSTATION*

"brings the washroom to the worker"* for only $52.50 per unit

(F.O.B. Saginaw, Michigan, towel dispensers not included)

Portable Wash-up units that save hundreds of man-hours... thousands of dollars!

The SBS Waterless Washstation is a complete hand-washing unit that requires no plumbing because it uses SBS-30 Waterless Skin Cleanser.

- **locates** close to work areas in factories, warehouses, or outdoors.
- **saves** up to $720 per unit annually by reducing time workers spend off the job washing up.
- **reduces** crowding in washrooms at lunch time and new shift time.
- **eliminates** use of harmful and irritating solvents.

SBS Waterless Washstation is heavy steel finished in grey-green enamel. Turret top has storage space, holds SBS-30 dispenser and two of your own paper towel containers. Removable cloth bag for used towels in base. Easy to fill dispenser has two-way feed adjustment that provides 1000 to 1500 washes before refilling. One turn of handle dispenses right amount of cleanser—no leakage, no waste. SBS-30 cleanser is just rubbed on, then wiped off along with all dirt and grease. Leaves hands clean, smooth and soothed. WRITE for complete information about SBS Waterless Washstations and our 30-day no-risk money back trial offer.

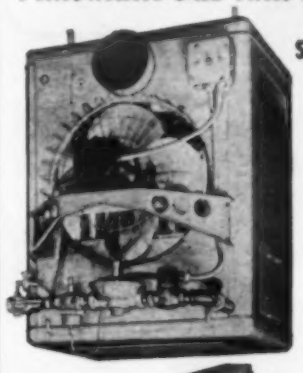
*Trademark 87

SUGAR BEET PRODUCTS CO., Saginaw, Mich.
Chemical By-Products Division, Dept. 3F

▲ For more details circle **NED-263 D3** on enclosed inquiry slip ▲

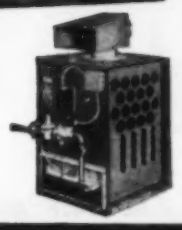
REZNOR
Since 1888
THE NAME YOU CAN COUNT ON!

Automatic Gas Unit Heaters for COMFORT PROCESS



SUSPENDED & FLOOR UNITS

Safe, compact, efficient and good looking heaters for individual or group operations. Equipped with big quiet fan or centrifugal blower, designed for every space requirement, every heating need.



DUCT FURNACES

Here's the answer for your most complicated problem in engineered heating and production line specialties! Basic heat producer, automatically controlled, automatically fueled. Perfect for air conditioning and other systems where close temperature tolerances are maintained.

SEE SWEET'S CATALOG FILES or WRITE FOR HEATING DATA

REZNOR MANUFACTURING COMPANY
41 UNION STREET, MERCER, PA.

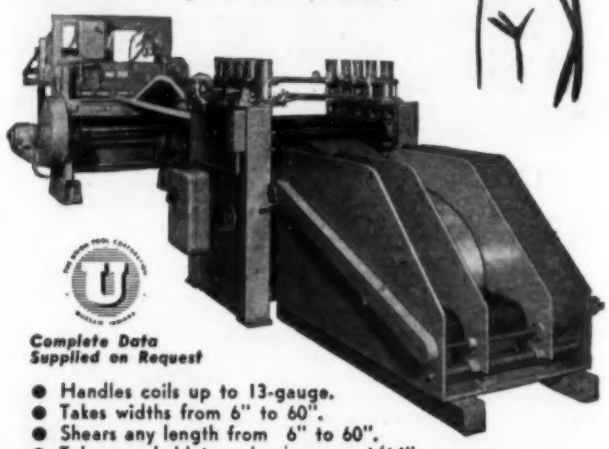
▲ For more details circle **NED-264 D3** on enclosed inquiry slip ▲

WITH ONLY ONE OPERATOR THIS **UNION MACHINE**

- DE-COILS
- LEVELS
- SHEARS
- STACKS

CUTS LABOR COSTS **AUTOMATICALLY** CUTS MATERIAL COSTS

Buy in coils and cut sheet lengths as needed. No delay.



Complete Data Supplied on Request

- Handles coils up to 13-gauge.
- Takes widths from 6" to 60".
- Shears any length from 6" to 60".
- Tolerance held to only + or — 1/64".
- Only one adjustment to change lengths.
- Speeds to 150 l.f.p.m. depending on lengths cut.
- Neatly stacks sheared pieces automatically.
- Will handle steel, aluminum, etc.

UNION TOOL CORP.
318 E. MARKET ST., WARSAW, IND., U. S. A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

▲ For more details circle **NED-265 D3** on enclosed inquiry slip ▲

WHERE CAN YOU USE A VARIABLE VOLTAGE ADJUSTOR

• Bulletin VA-180 gives complete specifications of Acme Electric Variable Voltage Regulators in ratings from 150 watts to 10 KVA. Write for copy.

Many industrial maintenance and operating problems can be quickly solved by the installation of a Variable Voltage Adjustor to manually control a low voltage or fluctuating voltage circuit. This is particularly true where a voltage drop at electrically powered equipment, located a considerable distance from a transformer, reduces the performance, efficiency and prevents normal operation. If you have a condition like this in your plant write for Bulletin VA-180.

ACME ELECTRIC CORPORATION
304 WATER ST. CUBA, N.Y.

Acme ACME Electric
TRANSFORMERS

▲ For more details circle **NED-266 D3** on enclosed inquiry slip ▲

When Jobs Reach PROCESS ENGINEERING...call FEDERAL for GAGE ENGINEERING!

WHEN YOU START TO PROCESS YOUR JOBS, that's the time to take advantage of our long experience in designing dimensional visual gages.—At Federal we know the basic difference between designing precision gages and other mechanical products.

THICKNESS, WIDTH and TAPER checked simultaneously. Tolerance lights show if a dimension is incorrect.

Designing precision gages requires knowledge of how to *magnify* and *transfer* measurement variations *precisely*, without *loss* of motion—with minimum *friction* and *inertia*—and a hundred other details which don't ordinarily concern tool and machine designers.

Whether it's an Air or Automatic Gage or a Dial Indicator type, there is every reason you should get better gages if Federal designs and builds them for you. Federal Products Corp., 1174 Eddy St., Providence 1, R. I.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively

For more details circle NED-267 D3 on enclosed inquiry slip

Loading Dock...or Parking Lot?

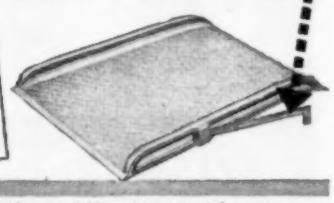
...one of Magliner's 34 Standard Dock Boards will load Your Trucks FASTER...SAFER...AT LOWER COST!

Magliner standard magnesium dock boards insure swift in-and-out truck movement . . . prevent valuable loading areas from becoming costly parking space! Magliner's 34 load-engineered standard models provide a low-cost link between truck and dock for virtually all truck docks . . . eliminate the need for expensive, custom-made equipment. Get smooth, rapid material flow from carrier to plant . . . keep trucks on the move! Gain substantial reductions in loading and unloading costs! Equip your truck docks with *magnesium*-light, *magnesium*-strong Magliner standard dock boards! Write today for bulletin DB-203.

MagLiner STANDARD
MAGNESIUM DOCK BOARDS

Light! Strong! Safe!
Adjustable To Varying Heights and Spans
WRITE FOR BULLETIN DB-203!

Exclusive
AUTOMATIC DROP LOCK
(pat. applied for)
• Positive Lock Prevents Slippage
• Quickly . . . Easily Adjustable

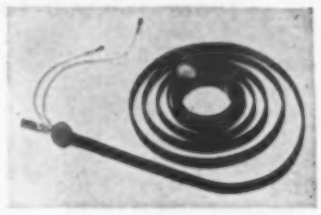


Custom-Engineered Dock Boards Also Available — Write For Information

MAGLINE INC. • P.O. BOX 396 • PINCONNING, MICHIGAN

For more details circle NED-268 D3 on enclosed inquiry slip

FLEXIBLE HEATING TAPE wraps around tubes and fittings



About ½-in. wide and 0.1-in. thick, Ribbon Heat Aeronautical, a flexible, electric heating tape will wrap around pipes, tubing and fittings. Product is waterproof and unaffected by prolonged exposure to oil, grease, gasoline, mild acids or alkalies. Heat is produced by current passing through fine fuse wires protected by fiber glass braid impregnated with polyethylene. Exterior jacket of flame-resistant vinyl-chloride plastic affords further protection. In event of severe injury or excessive heating of element, circuit opens by melting of fusible conductors without spark or flame. At one end wires are connected to pair of 6 and 8-in. nonheating leads which terminate in Burndy YZ18-H quick disconnects. Molded vinyl buttons protect both ends. Made by Cox & Co., Inc., and distributed by **Air Associates, Inc.**, Dept. NED-1, Industrial Ave., Teterboro, N. J.

For more details circle NED-269 D3 on enclosed inquiry slip

MATERIALS HANDLING UNIT mounts on industrial tractors and has tilting type tower

Designed for mounting on Case, Minneapolis-Moline, Shepard and Oliver industrial tractors, the Baker-Lull Universal Loader facilitates material handling operations in snow, mud and over rough terrain. It combines a tilting tower with ten handling attachments to serve a wide range of industrial requirements. Currently, it is offered in 2500, 4000 and 6000-lb capacities. Large high-flotation tires, high underclearances and axle oscillation on industrial tractors enable them to operate under extreme conditions.

Tilting tower affords tilt-forward position for efficient digging and dumping, loading and unloading; while backward-tilt affords effective balance with capacity load and minimizes slippage. Double-acting hydraulic cylinders give 20-degree forward and 9-degree backward tilt. Lifting height of largest model is 100 in., with higher lifts optional.

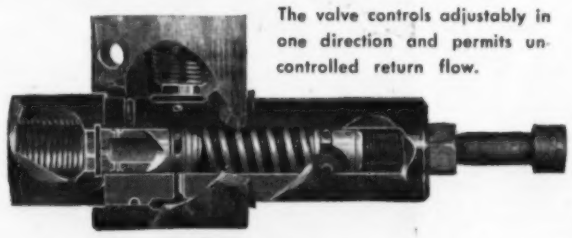
Available attachments for use with Loader are adjustable lifting forks, coal bucket, snow bucket, material bucket, bulldozer blade, reversible angle bulldozer blade, crane lifting hook, V-type snow plow, lifting platform and gas-powered sweeper. Unit is usable indoors as well as outdoors. Made by **Baker-Lull Mfg. Co.**, 376 W. 90th St., Minneapolis 11, Minn.

For more details circle NED-270 D3 on enclosed inquiry slip

An Adjustable

FLOW REGULATOR

This newly perfected adjustable Flow Regulator holds at a constant rate even though the pressure fluctuates.



The valve controls adjustably in one direction and permits uncontrolled return flow.

The spring back piston in the housing is mounted in front of the adjustable screw. It carries a calibrated orifice; operates axially on change in inlet pressure so as to increase the throttling action.

Four sizes, ¼, ⅜, ½, and ¾ inch. Overall length 4½ to 7½ inches. Adjustable over a 50% flow range. Maximum pressure is 3000 pounds.

Write for illustrated circular H

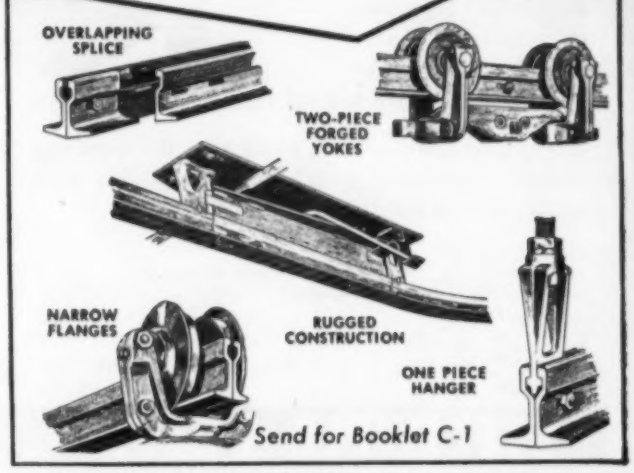
WATERMAN ENGINEERING Company
725 CUSTER AVENUE
EVANSTON, ILLINOIS

For more details circle NED-271 D3 on enclosed inquiry slip

MONORAIL SYSTEMS FABRICATED TO FIT

American MonoRail is fabricated to fit any handling job. Systems are available for hand or electric operation, including rubber wheel drive with local or remote control providing many automatic features.

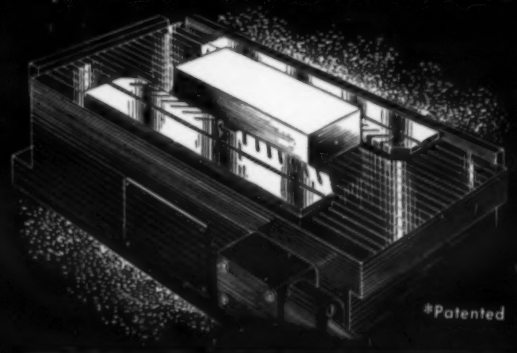
AMERICAN MONORAIL CO.
13116 Athens Ave. • Cleveland 7, Ohio



For more details circle NED-272 D3 on enclosed inquiry slip

Magna-Vise*

...INCREASES THE VALUE OF YOUR MAGNETIC CHUCKS ...ENABLES THEM TO HOLD *any* rigid non-magnetic material



*Patented

Get full details on this revolutionary shop-proved device . . . write Dept. ND-43

Hanchett MAGNA-LOCK CORPORATION
Magna-Lock
Magnetic Chucks and Devices
BIG RAPIDS • MICHIGAN, U. S. A.

For more details circle NED-273 D3 on enclosed inquiry slip

MAKES BASEMENTS DRY!

Leaks in concrete walls can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a plaster coat for sealing off water and dampness. Converts wet basements into dry useful space. Used in elevator pits, tunnels, dams, tanks, retaining walls. In reconstruction work, broken pillars and beams can be quickly reshaped with FLEXTITE.

MAIL COUPON for FREE TRIAL OFFER

FLEXTITE

FLEXROCK COMPANY
3603-F Filbert St., Philadelphia 4, Pa.
Offices in Principal Cities

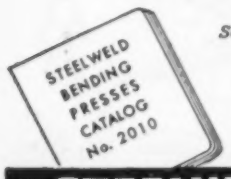
Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN—no obligation.
Name .....
Company .....
Address .....

For more details circle NED-274 D3 on enclosed inquiry slip

IF YOU WORK WITH PLATE YOU NEED A STEELWELD PRESS

If you work with metal in any thickness from 12 gauge to one inch most likely a Steelweld Press would prove helpful and profitable to you.

Steelwelds are versatile tools that do bending, forming, drawing, punching, etc. quickly with simple, easily set dies.



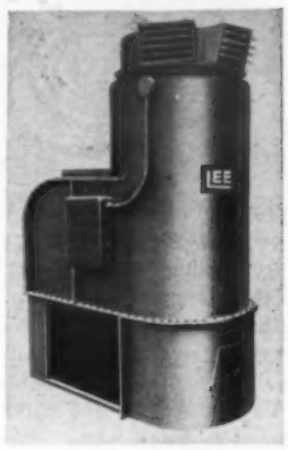
Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6638 East 281st St. Wickliffe, Ohio

STEELWELD PRESSES

For more details circle NED-275 D3 on enclosed inquiry slip

SPACE HEATERS
eight sizes available with outputs from 300,000 to 1,500,000 Btu



Completely shop assembled and flame tested, line of universal duty space heaters for light industrial application includes eight models with outputs ranging from 300,000 to 1,500,000 Btu. Heaters are lightweight for floor mounting, portable use or suspension mounting either horizontal or inverted. One properly sized, slow speed blower assures quiet operation. Unit can not blow cold air since exhauster is separately driven. Adjustable outlets can be moved to suit conditions.

Heater has stainless steel combustion chamber with refractory lining optional. Firing equipment features automatic controls and electronic eye for safe operation. Units fired by stoker using coal, light oil, gas, heavy oil or light oil and gas combination are available. Heated areas range from 97 to 386 sq ft, and deliveries at 70° F are from 3500 to 17,000 cfm. Made by **Lee Corp.**, Dept. NED-1, 1011 Tatnall St., Wilmington, Del.

For more details circle NED-277 D3 on enclosed inquiry slip

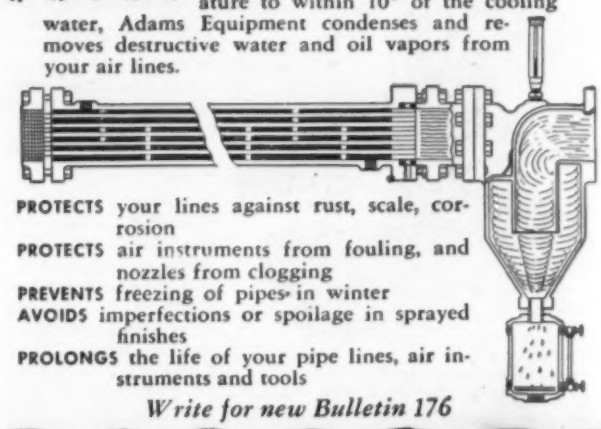
You Can be Sure of Clean Dry Air for your Compressed Air Tools

3500 Gallons

1 YEAR'S water extraction from air lines equipped with Adams Aftercooler and Cyclone Separator.

with **ADAMS** Aftercooler and Cyclone Separator

● Reducing compressed air temperature to within 10° of the cooling water, Adams Equipment condenses and removes destructive water and oil vapors from your air lines.



PROTECTS your lines against rust, scale, corrosion
PROTECTS air instruments from fouling, and nozzles from clogging
PREVENTS freezing of pipes in winter
AVOIDS imperfections or spoilage in sprayed finishes
PROLONGS the life of your pipe lines, air instruments and tools

Write for new Bulletin 176

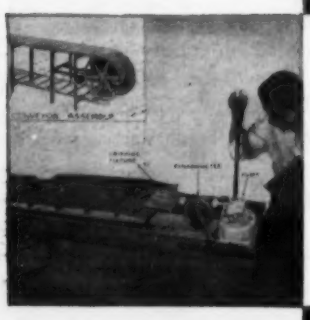
R. P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

For more details circle NED-280 D3 on enclosed inquiry slip

to measure *tension, traction or weight* do it accurately with DILLON DYNAMOMETERS!

COST IS NEGLIGIBLE

Rugged, compact, accurate; DILLON DYNAMOMETERS are simple and easy to handle and read.



From simple weighing to intricate torque tests, the DILLON DYNAMOMETER is doing the job with the same unfailing accuracy, versatility and rugged dependability which has made it a "by-word" in industry throughout the world. Your own plant becomes your testing laboratory with a DILLON DYNAMOMETER.

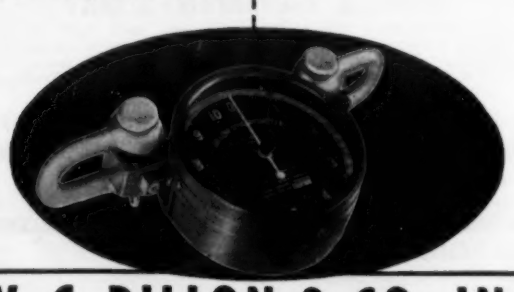
Built to take years of hard, daily use, the DILLON will pay for itself many times over.

Light: 8 lbs. 4 ozs. (5" dial model.)

Compact: 8¼" long, 6¼" high, 3" thick.

Accurate: Calibrated in Certified Laboratory Testing Machine.

The DILLON DYNAMOMETER is made in 9 different capacities: 0-500 lbs. up to 0-100,000 lbs. All have max. hand, shackles, safety glass crystal. There are thousands in use today by leading companies all over the world. Write for profusely illustrated Bulletin D-1.



W. C. DILLON & CO., INC.

Precision Instruments for Precision Testing

14620NE KESWICK ST. • VAN NUYS (Suburb of Los Angeles) CALIF.

For more details circle NED-276 D3 on enclosed inquiry slip

UTILITY TRACTOR
with torque converter transmission features infinitely variable speed

Infinitely variable speeds both forward and reverse, free wheeling and smooth operation are features given this utility tractor by Power-Flow automotive type torque converter transmission. This torque multiplying drive also asures minimum fatigue for the operator and elimination of shock and wear on equipment. It permits the tractor to start instantly under full power and with maximum drawbar pull. Other features of tractor are one-piece curved handlebar, low center of gravity, power take-off, welded steel frame, 6 x 16-in. implement tires and 3½-hp Kohler four-cycle air-cooled gasoline engine. Various attachments are available, such as plow, roller, sickle bar, sulky, cart and rotary snow plow or bulldozer blade. Power take-off is included for operating accessory equipment. Made by **Bready Tractor & Implement Co.**, 28002 N. Aurora Rd., Solon, O.

For more details circle NED-278 D3 on enclosed inquiry slip

Closer temperature control, cleaner aluminum, cooler and less congested conditions are obtained with

AJAX INDUCTION FURNACES

Thousands of die cast rotors for hermetic motors are made from pure aluminum poured from a battery of AJAX Electric Induction Furnaces installed in the St. Louis plant of the Emerson Electric Mfg. Co. Two of these furnaces are shown in the photograph at right.

Our electrical industry produces fractional horse power motors at the rate of 20 to 25 millions per year. After World War II the leading manufacturers changed from fabricated copper rotors to cast aluminum rotors. In this operation, aluminum of high purity under closely controlled temperature is required.

In many cases the machines had to be placed right on the assembly line, with severe space restrictions and, of course, with rigid requirements for reliability. AJAX induction furnaces and AJAX automatic pouring units were selected for this job in almost all the plants which switched from copper to aluminum rotors.

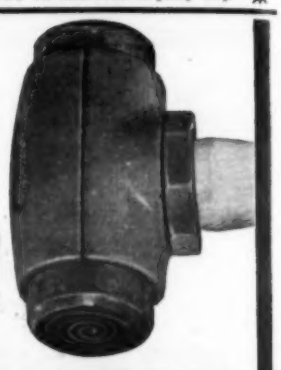
Write for further information to

AJAX TAMA-WYATT — AJAX ENGINEERING CORP., TRENTON 7, N. J.
INDUCTION MELTING FURNACE

AJAX ELECTRO METALLURGICAL CORP., and Associated Companies
AJAX ELECTROTHERMIC CORP., Aja Melting High Frequency Induction Furnaces
AJAX ELECTRIC CO., INC., The Aja Multiple Electric Salt Bath Furnace
AJAX ELECTRIC FURNACE CORP., Aja Multi Industrial Furnaces for Melting

For more details circle NED-279 D3 on enclosed inquiry slip

The best "soft" hammer your money can buy!



C/R **JAW-HEAD**

Tough, resilient water buffalo faces deliver needed power, cushioned to protect fine finishes and delicate parts. Faces quickly and easily replaced. Safety-Flare handle gives comfortable non-slip grip. When you need a "soft" hammer, make sure it's a C/R **RAWHIDE Jaw-Head.**

For further information write Dept. 22

FACES REPLACED IN SECONDS
Merely loosening a nut releases jaws for replacing faces. Tightening nut holds faces in vise-like grip.

CHICAGO Rawhide MFG. CO.
1301 Elston Ave., Chicago 22, Ill.
In Canada: Super Oil Seal Mfg. Co., Ltd., Hamilton, Ontario

Available from leading industrial suppliers. Also C/R Rawhide mallets and Rawhide mauls.

For more details circle NED-281 D3 on enclosed inquiry slip

IT'S 75 to 1

Abart has the EXACT SPEED REDUCER **for your application!**

Choose the ABART Speed Reducer you need from the complete line of over 75 different ABART models—spur, worm, and combination gear. Ratings from 1/50 to 168 hp., with ratios up to 10,000 to 1. ABART Speed Reducers help make the products you design and manufacture—better!

Send for handy pocket-size ABART Catalog today!

Abart GEAR & MACHINE CO.
4826 WEST 16th STREET • CHICAGO 50, ILLINOIS
Mfrs. of Gears, Speed Reducers and Gearmotors

For more details circle NED-282 D3 on enclosed inquiry slip

TOUGH GUY...

With Accurate Control

Masoneilan Air Reducing Valve

This accurate reducing valve is built to take it. Compact. Easy to service. Has large capacity . . . instant response. Its sturdy dependability and simple construction reduces maintenance to a minimum.

Initial pressure up to 250 lbs. reduced to any pressure from 5 - 60 lbs., 60 - 100 lbs. Sizes ¼" to ½". Pressure gauge included.

Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

MASON-NEILAN
REGULATOR CO.
1189 ADAMS ST., BOSTON 24, MASS., U. S. A.

For more details circle NED-283 D3 on enclosed inquiry slip

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safe, long-lasting
MAGCOA
light-weight HEAVY-DUTY
DOCKBOARDS
will cut your handling costs

Here is the valuable information about MAGCOA Light-weight HEAVY-DUTY DOCKBOARDS contained in this new bulletin.

- how to reduce dock accidents—protect men, equipment and loads—because they are light and easy to handle.
- how they speed up loading and unloading.
- how they are braced like a bridge and individually engineered for your requirements—built to last indefinitely.
- how exclusive MAGCOA features make for greater maneuverability, prevent run-offs, prolong tire-life.

Above all, you'll discover why so many top industrial companies have standardized on MAGCOA Dockboards for freight car and truck loading *in all their plants.* At the same time, ask for new literature showing how Magcoa's magnesium fabricating experience and facilities can help you improve your products through use of light-weight, heavy-duty magnesium.

MAGNESIUM COMPANY OF AMERICA
EAST CHICAGO 6, INDIANA – *Representatives in Principal Cities*

See us at BOOTH 1126 { NATIONAL MATERIALS HANDLING EXPOSITION PHILA.-MAY 18-22, 1953

For dockboard data circle NED-284 D3 on enclosed inquiry slip
For fabricating data circle NED-285 D3 on enclosed inquiry slip

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MINIATURE BALL BEARINGS
11 sizes from 0.1969 to 0.8661-in. OD

Measuring only 0.1969-in. OD with bore of 0.0591-in., this Conrad type RMB Filmoseal miniature ball bearing has deep-groove inner and outer raceways and ball retainer. A capillary film of lubricating oil forms between tapered outer surface of inner race and edge of precision closure, sealing bearing against dirt and moisture. Bearing adjusts to variations in pressure and temperature. Series includes 11 sizes ranging up to 0.8661-in. OD and is applicable to precision instruments, meters and computers. Made by **Landis & Gyr, Inc.,** Dept. N, 45 W. 45th St., New York 36, N. Y.

For more details circle NED-286 D3 on enclosed inquiry slip

BAND SAW BLADE WELDER
portable unit has built-in grinder

Band saw blades from 1/16 to ¾-in. can be butt welded by the portable band saw blade welder, a compact unit with built-in grinder for removing flash from the weld. A double gage checks thickness of weld on flat saws. Instructions are printed on the name plate, and simplified controls assure uniform results with inexperienced operators. Unit weighs 31 lb and measures 7¾ x 12 x 7 in. Operation is on 110 v ac, 60 cycles. Made by **Brennen Mfg. Co.,** 676-B 59th St., Brooklyn 20, N. Y.

For more details circle NED-287 D3 on enclosed inquiry slip

PIPING GASKET
used in Quickupl pipe fittings

Made from Neoprene W under close quality control, line of rubber rings for Cooper Alloy Foundry Quikupl fittings for joining stainless steel piping assures tight seal. Fittings are used extensively in the chemical and processing industries and have couplings with a rubber coaling ring bonded inside. Sealing rings shown have extremely high resistance to compression set. Made by **Minnesota Rubber & Gasket Co.,** 3630D Wooddale Ave., Minneapolis 16, Minn.

For more details circle NED-288 D3 on enclosed inquiry slip

Don't spoil it- KROIL it!

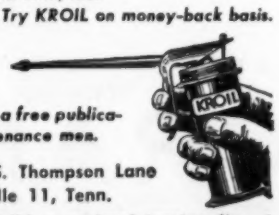
Don't ruin a valuable piece of equipment merely because some part is rusted tight. Apply *KROIL,* the amazing new chemical lubricant that creeps into millionth inch spaces (proved by laboratory tests), **dissolves rust, supplies necessary lubrication and . . .**

Loosens Frozen Parts

11,000 of America's leading plants can't be wrong. They have used KROIL for ten years and depend on it to save expensive labor and valuable parts. They say: "Kroil loosened bushings after a 12-ton press had failed". . ."on repairing heat treat trolleys formerly destroyed every nut. Now KROIL saves them all, and time, too."

You too can get these results. Try KROIL on money-back basis.

Gallon, $3.85; with Kroiler squirt gun, $4.95, f. o. b. factory.



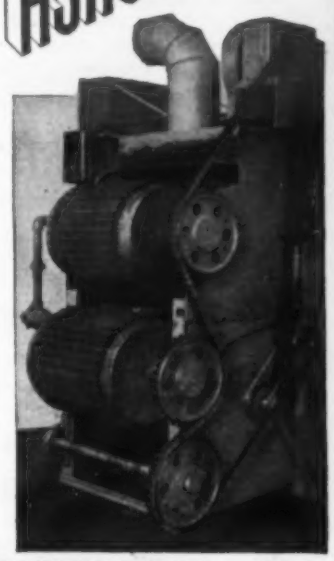
Ask for GENIUS AT WORK—a free publication full of ideas for maintenance men.

KANO LABS. 1074 S. Thompson Lane Nashville 11, Tenn.

For more details circle NED-289 D3 on enclosed inquiry slip

Metal Belts
for Processing and Handling all Materials . . .
engineered for the specific end use by

ASHWORTH



For applications ranging from subzero to 2100°F.

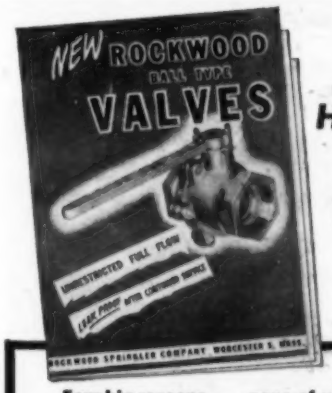
Our Engineering and Testing standards are your assurance of "The Right Belt" for the job.

WRITE FOR ILLUSTRATED CATALOG 52D

ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers: Buffalo • Chattanooga • Chicago • Cleveland • Detroit • Kansas City • Los Angeles • New York • Philadelphia • Pittsburgh • Rochester • Seattle • St. Paul • Tulsa — Canadian Rep., PECKOVER'S LTD. - Toronto - Montreal

For more details circle NED-290 D3 on enclosed inquiry slip



Booklet tells *HOW and WHY* ROCKWOOD BALL VALVES *OUTPERFORM THEM ALL*

Four big reasons . . . none of which can be overlooked.

1. **They open and close quick and sure.**
2. **They're leakproof.**
3. **Stay leakproof.**
4. **Require no maintenance. And they assure full round flow of the fluid.**

Bulletin V-4 Tells All

. . . How in industry after industry this superior valve lives longer. Keeps operating costs low. Chemical, paper, textile, petroleum, food and many other fields demanding continuous operation rely on Rockwood.

Get details on the new advances in ball valve applications in many industries. No obligation. Write for Bulletin V-4 to Rockwood Sprinkler Company, 44 Harlow Street, Worcester 5, Mass. Distributors in all principal cities.

Tested by Underwriters' Laboratories, Inc.

ROCKWOOD

ROCKWOOD FULL-FLOW BALL VALVES
THE FLOW IS AS ROUND AS THE PIPE ITSELF

For more details circle NED-291 D3 on enclosed inquiry slip

Don't be surprised

. . . If the *HydroLectric* Lift Truck makes savings of 50 to 80% in your material handling.

HERE'S WHY...

HYDROLECTRIC is easier to operate because of its finger-tip control that is simplicity at its best.

HYDROLECTRIC does the job safely and quickly with its exclusive Dyna-Dual Power Unit that is quiet, odorless, powerful, rugged, and maintenance is practically nil.

HYDROLECTRIC costs less to operate than any other leading truck, and industry after industry has proved that it pays for itself in 3 months.

Want proof? Write for complete information.

LIFT TRUCKS INCORPORATED
2423-31 SPRING GROVE AVE.
CINCINNATI 14, OHIO

Over 1000 models and sizes

HYDROLECTRIC, HYDROMATIC and RED ARROW LIFT TRUCKS

For more details circle NED-292 D3 on enclosed inquiry slip

INDUSTRIAL FILTERS By GENERAL

GENERAL INDUSTRIAL FILTERS are the right "prescription" for reducing machine wear and maintenance costs wherever hydraulic or lubricating oils are used—insure clean lacquers, paints, and other industrial liquids.

GENERAL'S AF-500

- Traps particles as small as 5 microns.
- Eliminates moisture due to condensation.
- Has cleanable, easy-to-replace ALL-WOOL felt cartridge.
- Assures double protection with fine wire screen inside felt to prevent collapse.

GENERAL'S AF-2000A

Links two AF-500s with a pump for forcing viscous liquids from a central supply tank through filters. Protects hydraulic and lubricating oils in a battery of machines at fraction of separate installation costs. Capacities up to 45 gpm.

Special Safety Motors Available

WRITE for specifications. Tell us your filtering problems.

GENERAL FILTERS, INC.
12890 WESTWOOD • DETROIT 23, MICH.

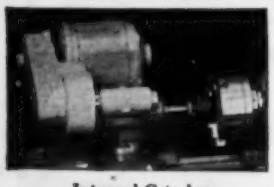
For more details circle NED-293 D3 on enclosed inquiry slip

"Canton"
THE LOW COST CRANE with a HUNDRED USES

Just one of a hundred lifting and transporting jobs made easy with a CANTON Portable Crane. Loads up to 3 tons can be moved anywhere in the shop by one man.

The HILL ACME CO.
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

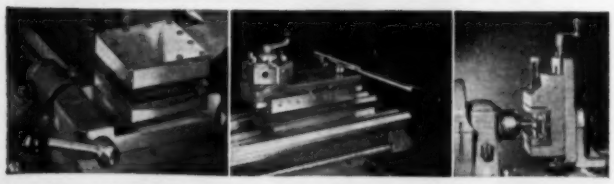
For more details circle NED-294 D3 on enclosed inquiry slip



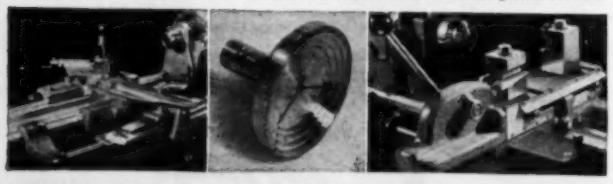
Internal Grinder

SOUTH BEND
Lathe Attachments

- Increase Lathe Versatility
- Simplify Difficult Jobs



Turret Tool Block — Handlever Bed Turret — Milling Attachment



Taper Attachment — Step Chuck — Handlever Cross Slide

10-in-1 Tool Holder — Handlever Collet — External Grinder

WRITE FOR CATALOG 5102 SOUTH BEND LATHE
Building Better Tools Since 1906 • SOUTH BEND, INDIANA

For more details circle NED-295 D3 on enclosed inquiry slip

LIFTING TABLE
positions work at machines, presses

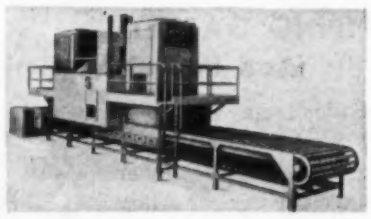
Moving and lifting or lowering dies, jigs, tools and other heavy objects can be performed expediently by the mechanical Liftable. Operated by one man, it is used to position work that is fed into machines, presses and drills, and can also be used as a portable work bench in maintenance operations. Improved table has a 2000-lb capacity, but at 380 lb is 120 lb lighter than original model. It measures 43 x 26 in. and is 28 in. high with table lowered. One threaded screw is used for lifting or lowering the table through its 14-in. range. Floor lock and 6-in. diameter Ni-Steel wheels are standard. Other wheel types, skid legs, roller tops, table extensions, and towing handle are optional. Made by **Service Caster & Truck Corp.**, Somerville, Mass.

For more details circle NED-296 D3 on enclosed inquiry slip

Who Else Needs NED?

Is there another engineering, maintenance or specifying official in your company who should be receiving NEW EQUIPMENT DIGEST regularly? If so, just give us his name and title. There's room on the postpaid self-mailing slip which is bound in this issue for you to fill in the necessary information.

CORE DRYING UNIT
handles 800-lb cores on metal plates



A 60-kw output dielectric heater mounted in an oven comprises model 200-A Foundromatic core dryer. Unit is constructed to handle up to 800-lb cores on metal plates as well as in some metal dryers, eliminating changeover to plastic dryers. Tests showed that cores on metal plates could be cured in a dielectric field when metal plates were heated to predetermined temperatures. By introducing supplementary means of heating plates after green cores are placed on them, the usual fast complete cure in the dryer is unaffected. Unit is rated at 3000 lb of cores per hour at 3 per cent moisture. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

For more details circle NED-297 D3 on enclosed inquiry slip

Don't take chances with relief valves

GET YOURS FROM CRANE

No better way to protect valuable piping and equipment against pressure build-up—than with Crane Relief Valves. They're engineered—and quality built—for dependable, positive action when properly installed for rated services.

The broad Crane line includes Relief Valves of brass, iron, steel and alloys—for steam, water, oil and other processing applications. To be absolutely sure, ask your Crane Representative or see your Crane Catalog.

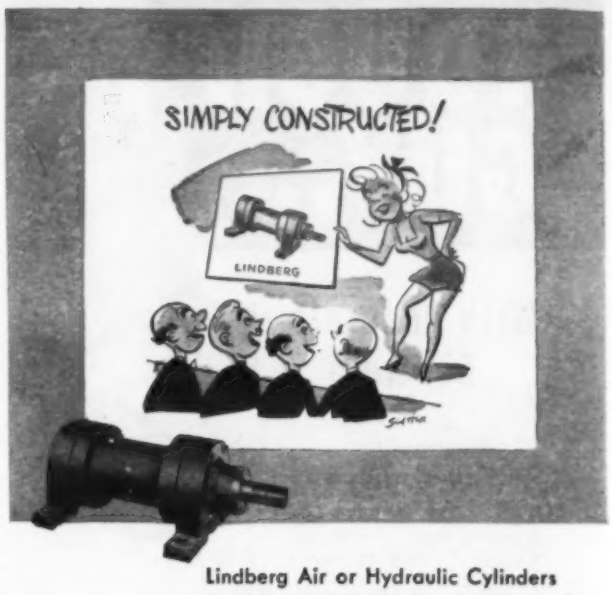
No. 2668
Brass Relief Valve
Especially recommended for gasoline or noxious gases. Sizes up to 2-inch.

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

CRANE — *Everything for Every Piping System*

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

For more details circle NED-298 D3 on enclosed inquiry slip



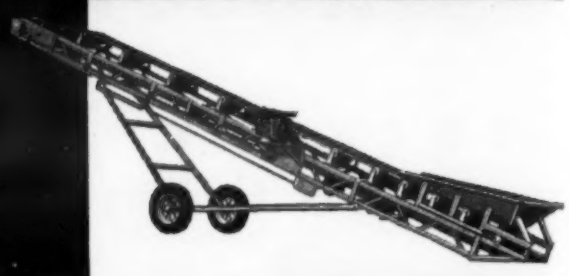
Lindberg Air or Hydraulic Cylinders provide dependable, low cost power for lifting, forcing, pulling, pressing, pushing and clamping. Ask for bulletin No. 701, "Lindberg Hydraulic Cylinders" .. or No. 731, "Lindberg Air Cylinders."

LINDBERG CYLINDERS AIR•HYDRAULIC

Lindberg Engineering Company, 2482 West Hubbard St., Chicago 12, Ill.

For more details circle NED-299 D3 on enclosed inquiry slip

SAVE MANPOWER

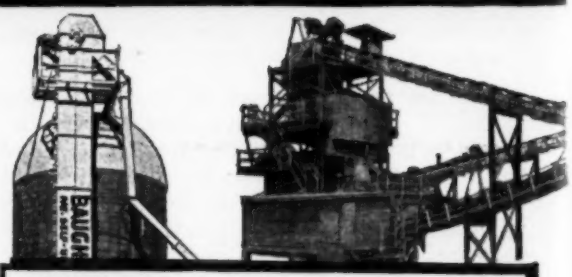


MODEL 230—Portable "Hi-Speed" troughed belt conveyor . . . standardized and "job-fitted" for more economical and faster handling. Built in lengths up to 46 ft. Powered by gasoline or electric motor. Write for Bulletin A-296.

with BAUGHMAN

MODEL Q-51—New Hi-Speed Screw Conveyor for all material that rolls or becomes fluid in motion. For permanent installations or portable models as shown above. Underbin or undertrack screw loader easily attached. Write for Bulletin A-295.

Bulk Material Conveyors



MODEL 175—Hi-Speed Belt and Bucket Elevator. Fully enclosed, spaced buckets, centrifugal discharge elevator for permanent or temporary installations. Also open belt and bucket elevators, Models 210 and 220 available. Write for Bulletin on these models.

MODEL 225—Conveyor combinations assembled from standardized sections, easily "job-fitted" to any bulk material handling. Prompt delivery from stock. Write for Bulletin A-342.

Sold and serviced nationally and in Canada. Write Baughman, the Best name in Bulk material handling.

BAUGHMAN
BAUGHMAN MANUFACTURING CO., INC.
114 Arch St. JERSEYVILLE, ILLINOIS

For more details circle NED-300 D3 on enclosed inquiry slip

BEST DEFENSE AGAINST CORROSION

Start with

TYGORUST

"the no-prep vinyl primer"

- minimizes surface preparation
- brushes easily—sprays beautifully
- dries hard in 5-15 minutes
- covers up to 500-600 sq. ft./gal.
- goes under any type finish
- adheres to wet or dry rusted steel, to wood, to concrete, or to previously painted surfaces.

Finish with

TYGON "Series TP" PAINT

"the vinyl finish of maximum protection"

- easily applied by brush or spray
- fast drying and non-oxiding
- fully flexible and chip-resistant
- non-flammable when dry
- easy to clean and long lasting
- resists fumes and spillage of acid, alkalies, oils, greases and water.

Write for full details—ask for Bulletin 720!

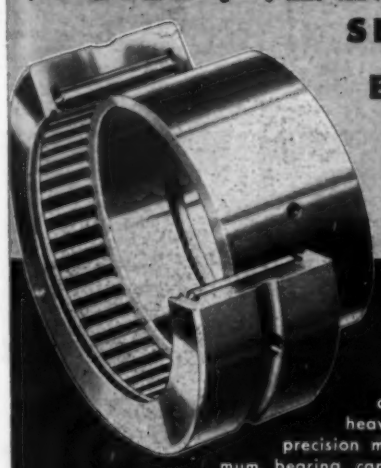
360 C

U. S. STONEWARE CO.
AKRON 9, OHIO

▲ For more details circle NED-301 D3 on enclosed inquiry slip ▲

Save the cost of bearing failures with

McGILL MULTIROL® SE SERIES BEARINGS



Millions of Multirol SE Series full type roller bearings are being used to carry heavier loads longer where precision machinery requires maximum bearing capacity in limited radial space. Your bearing applications can be improved with such Multirol design advantages as solid roller retaining end shoulders, simplified lubrication, with built in lubrication reservoirs.

Send for McGill Catalog No. 52

McGILL® precision bearings

McGILL MANUFACTURING CO., INC. 101 N. LAFAYETTE ST. VALPARAISO, INDIANA

▲ For more details circle NED-302 D3 on enclosed inquiry slip ▲

NOW for complete protection
FROM THE WET • GREASE • OILS • ORDINARY ACIDS

TOWER'S
FISH BRAND
*NEOPRENE

These sturdy, durable, 100% DuPont **NEOPRENE** garments give that extra service to those who require protection from greases, oils, and most acids. There is a TOWER protective garment especially adaptable for every type of industrial activity. We will be glad to recommend the garment which best meets your individual requirements.

**A chemical rubber product of the DuPont Company*

For folder of styles and detailed information write Department SF.

NEOPRENE RUBBER

TOWER'S FISH BRAND

A. J. TOWER CO.
24 SIMMONS ST. BOSTON, MASS.

TOWER'S ARROW BRAND

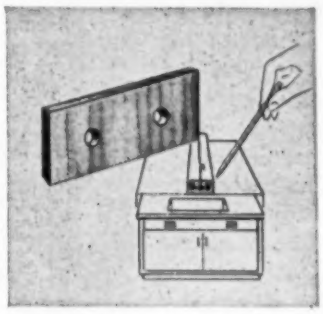
▲ For more details circle NED-303 D3 on enclosed inquiry slip ▲

ROOF VENTILATOR
for exhaust or fresh air supply

Adapted to windowless plant construction, type RVD and RVB Power Line roof ventilators are intended for use as exhaust fans, but can be reversed for fresh air supply. Housing and hood are made of heavy gage steel, coated with noise deadening material. Automatic built-in louvers, which act as a back draft damper, can be installed at the base of the unit, if desired. Explosionproof and totally enclosed motors and direct and belt drive fans are offered. Ventilator sizes from 12 to 48 in. handle from 1300 to 20,000 cfm free air, or 860 to 14,500 cfm at ⅛-in. static pressure. Made by **Chelsea Fan & Blower Co.**, Dept. NED, 639 South Ave., Plainfield, N. J.

▲ For more details circle NED-304 D3 on enclosed inquiry slip ▲

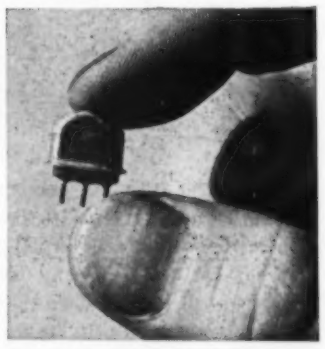
LABORATORY FAUCET PANEL
simplifies assembly of island sinks



Island assemblies of back-to-back Fisher unitized laboratory equipment has led to development of this faucet panel which permits a modular sink to be placed flush against adjoining units. This birch panel and splashback accommodates a double faucet and fills the gap which would otherwise exist between sink and reagent shelves of other units. Made by **Fisher Scientific Co.**, 715 Forbes St., Pittsburgh 19, Pa.

▲ For more details circle NED-305 D3 on enclosed inquiry slip ▲

TRANSISTORS
of point contact type

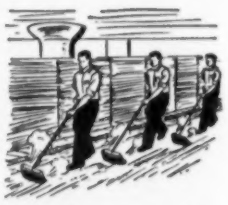


Besides entering into quantity production of point contact type transistors, this company is offering the services of its electronics laboratory and test equipment. Its personnel is available for consultation in the transistor field. Transistors are made under Bell Telephone Laboratories license by **Hydro-Aire, Inc.**, Dept. NED, 3000 Winona St., Burbank, Calif.

▲ For more details circle NED-306 D3 on enclosed inquiry slip ▲

Cleans 12 miles of aisles in 6 HOURS!

The new Multi-Clean Motorized Sweeper can be a time and money saver for you just as it is for this large paper products plant. These 8 ft. warehouse aisles, the factory floors, sidewalks, alleys and freight docks are all cleaned in a fraction of the time formerly required by the old fashioned push broom method. Powered by a gasoline engine, the sweeper combines a Palmyra filled rotary sweeping brush 36 inches long and a powerful built-in vacuum unit. With side brush attachment sweeping width is increased to 4 feet.



Took 3 men with push brooms 8 hours to do the job.

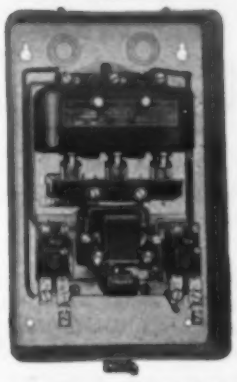
Picks up dirt, dust, steel shavings, paper, grass, small metal parts and milling debris. The Sweeper's trouble-free service, easy operation and low price make it the best buy in the motorized sweeper field. For more information write—

MULTI-CLEAN® PRODUCTS INC.
2277 Ford Parkway, Dept. NE-4 St. Paul 1, Minn.

▲ For more details circle NED-307 D3 on enclosed inquiry slip ▲

A negative approach to POSITIVE BENEFITS

CLARK TYPE "CY" starters have



No trick mounting problems
No crowded wiring spaces
No lack of concentric knockouts
No installation troubles
No parts back-removable
No tools needed for inspection
No loose screws in contact arm
No single-break contacts
No carbonizing in arc chamber
No overload difficulties
No burning in steel arc space
No openings in top of arc shell

This string of positive *"NO's"* is supplemented by a long list of affirmatives that make CLARK Type "CY" the ideal starter for practically any AC motor application.

So—when you buy, you'd better try CLARK TYPE "CY"

Write for descriptive literature.

THE CLARK CONTROLLER CO.
EVERYTHING UNDER CONTROL • 1146 EAST 152nd STREET, CLEVELAND 10, OHIO

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Bendix automotive Electric Fuel Pump

Unmatched for
LONG LIFE and RELIABILITY

Built-in Pressure Release . . . No flooding . . . Assures satisfactory **Re-Starts on Hottest Days**

Dependable as no Fuel Pump has ever been
under all operating conditions

Performance Proven. Years of research, development, and rigorous tests have been made on this pump.

Longer Life—No Pressure Drop. No bearings or levers to wear; no diaphragm to fatigue.

Delivers More Gallons Per Hour. Can deliver more than 30 gallons output per hour. Two or more pumps can be manifolded.

Economical Operation. Low original cost and *long dependable life* make this fuel pump the best buy on the market.

Improves Low Temperature Starting. Tests prove that engines start at 10 to 15 degrees lower with the Bendix Fuel Pump.

Eliminates Vapor Lock. Assures a constant, dependable supply of fuel in the hottest weather.

Low Power Requirements. Only 7 watts at maximum fuel delivery.

Dependable Operation at 75° Below Zero. That's why the U. S. Army Ordnance Corps chose it to pump fuel to heaters in the extreme cold of the Arctic.

Easy to Install—Easy to Service—Tamper-Proof. Simple two-bolt mounting. No adjustments. Electrical system, sealed *in helium*, insures longest possible life.

Light Weight—Compact. A giant in output but a midget in weight—one pound, thirteen ounces.

WRITE TO DEPT. J

Eclipse Machine Division
Elmira, New York • Division of Bendix

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YOU CAN DO IT FASTER with HANSEN ONE-HAND TACKER

MODEL T-1 TACKING TABLE TOPS

Only ONE of 1001 Uses

FASTER! With its zip-zip compound leverage action, Hansen saves time in all types of tacking and fastening. Fast, easy one-hand operation. Tacks fast as you grip.

BETTER! Balanced design insures accurate, precision driving. Powerful action drives each staple firmly and neatly in place for improved quality and increased holding power. It is adaptable to a wide variety of uses.

AT LESS COST! Hansen saves *time, steps,* and *materials* — operates faster — saves back-tracking — ready for instant, continual use.

(MODEL T-3-4 HANSEN TACKER)

36 DIFFERENT MODELS

80 STAPLE SIZES

REQUEST BOOKLET TODAY

A.L. HANSEN MFG. CO.

5164 RAVENSWOOD AVE., CHICAGO 40, ILL.

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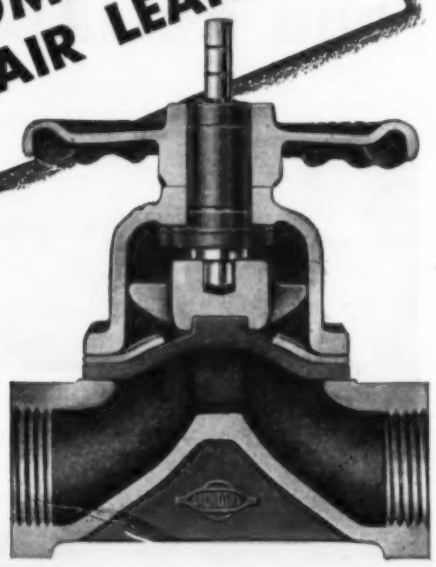
Originally designed to eliminate COMPRESSED AIR LEAKS



GRINNELL-SAUNDERS DIAPHRAGM VALVE

The operating principle of the Grinnell-Saunders Diaphragm Valve is simple. A rubber diaphragm, seating on metal, makes possible an absolute seal. At the same time, because working parts are wholly isolated, no packing glands are necessary, and stem leaks are impossible.

Successful on compressed air lines, it was only a matter of time before Grinnell-Saunders Diaphragm Valves were in demand for other type installations . . . handling materials as diversified as corrosive fluids, gases, beverages, foods, suspended solids . . . in lines where corrosion, abrasion, contamination, clogging, leakage and maintenance are costly factors.

Grinnell-Saunders Diaphragm Valves can be had with body, lining and diaphragm materials to meet different service conditions. Write for the Grinnell-Saunders Diaphragm Valve Catalog.

Quick Operating Valve

GRINNELL

WHENEVER PIPING IS INVOLVED

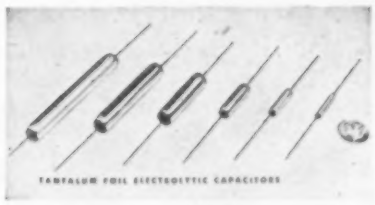
GRINNELL COMPANY, INC.

Executive Offices: Providence, Rhode Island

Sales Offices and Warehouses in Principal Cities

For more details circle NED-311 D3 on enclosed inquiry slip

ELECTROLYTIC CAPACITORS
improved units use tantalum foil



TANTALUM FOIL ELECTROLYTIC CAPACITORS

By combining the technique acquired in making aluminum capacitors with advantages offered by tantalum metal, this line of improved type TAN electrolytic capacitors is corrosionproof and durable. They have extremely low leakage and long operating life. Low power factors are evident at room as well as higher temperatures. They will also operate in temperatures of −85° C. Wound foil construction assures good frequency characteristics. Both polarized and nonpolarized types are offered in variety of capacity ratings for voltages up to 150 wv. Made by **Cornell-Dubilier Electric Corp.,** Industrial Div., 1047 Hamilton Blvd., South Plainfield, N. J.

For more details circle NED-312 D3 on enclosed inquiry slip

GAS FLOW METER
checks air or gas flow

Available in 11 different sizes, Flometers have built-in calibration for specific gas and rate of flow to be measured. They are designed for air and industrial gas service at pressures up to 50 psi and temperature to 150° F. Meters are easy to read. Though designed for panel mounting, they can be bracket mounted singly or in groups. Cleaning is accomplished in less than 2 minutes without special tools. Large tab affixed to bottom of meter indicates in large red letters the specific gas being measured. Made by **Waukee Engineering Co.,** 759 N. Milwaukee St., Milwaukee 2, Wis.

For more details circle NED-313 D3 on enclosed inquiry slip

CAR LOADING RAMP
locking type made of magnesium

Easily transported, placed in position and removed by one man, the flared car loading and unloading ramp is light weight and has a full-range locking device. It is made of nonskid magnesium Diamond safety plate, is crowned for serving different levels and has beveled edges. Dockboard is 60 in. wide at car door end and 84 in. wide at dock end. Fifty-two standard models are offered, with capacities of 3000, 6000, 8000 and 10,000 lb. Made by **Penco Engineering Co.,** Dept. TR, 25 California St., San Francisco 11, Calif.

For more details circle NED-314 D3 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

SAFE STORAGE FOR EXCELSIOR AND OTHER INFLAMMABLE MATERIALS

Meet all fire regulations of Insurance Companies, State and Municipal authorities.

IPCO SAFETY STORAGE BINS

For shipping and receiving rooms and other plant areas where excelsior, paper, rags, paint and other combustibles are used. Sturdily manufactured of heavy gauge galvanized iron with reinforced angle corners. Fitted with fusible link so cover is allowed to close automatically in case of fire.

WRITE FOR BULLETIN NO. 63

IPCO Safety Equipment for all Industries

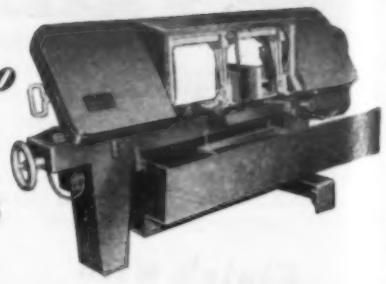
INDUSTRIAL PRODUCTS COMPANY

2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-315 D3 on enclosed inquiry slip

GET ACCURACY that SAVES STOCK . . .

. . . get *Kalamazoo* METAL CUTTING BAND SAWS



Here's *real* precision metal sawing that cuts waste to a minimum, saves hard-to-get stock. *Kalamazoo* Band Saws cut bars, rounds, flats, angles, odd shapes to within a few thousandths of size. What's more, there's an absolute minimum of kerf and no burr.

You can get Kalamazoo Metal Cutting Band Saws in three sizes . . . for cutting 6" to 12" rounds. 6" x 10" to 12" x 20" flats. Each model can be had with coolant system for continuous cutting. Each is available with casters for complete portability. Write for details on the many exclusive *Kalamazoo* features that spell *better cutting at lowest cost to you.*

MACHINE TOOL DIVISION

Kalamazoo TANK and SILO CO.

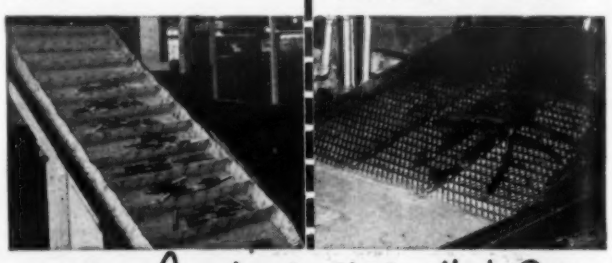
412 HARRISON ST., KALAMAZOO, MICHIGAN

For more details circle NED-316 D3 on enclosed inquiry slip

Why a Wire Mesh Conveyor Belt

because— the moving belt gives fast continuous production, frees costly manual labor for more valuable work.

because— open mesh allows free drainage of process solutions, circulation of process atmosphere, is unharmed by heat, cold, corrosive agents.



Why a Cambridge Wire Mesh Belt

because— Cambridge leads the field in wire mesh belt development and uses, offers you wire mesh belts in any mesh or weave, metal or alloy, length or width.

because— Cambridge offers you a complete engineering service for continuous processing in metal, ceramic, chemical or food plants.

NEW BELT MANUAL—WRITE FOR IT, FREE! Write for information or call in your Cambridge Field Engineer. See "Belting-Mechanical" in your classified telephone book.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

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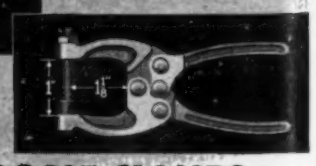
Cambridge 4, Maryland

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle NED-317 D3 on enclosed inquiry slip

Save DOLLARS

—SPEED PRODUCTION



with DESTACO TOGGLE CLAMPS

De-Sta-Co Toggle Clamps are extremely flexible in their application and are economically and easily adapted to work-holding fixtures for assembly, welding, bonding, machining or other production processes. Smooth, fast, powerful clamping action clamps parts quickly . . . holds them firmly in perfect alignment . . . releases instantly for easy removal and insertion of new workpiece.

De-Sta-Co clamps are engineered for rugged use in production; reamed bearing holes insure precision fit, long life and sensitive operation . . . offsets in handles and links relieve friction . . . made with cold drawn bars, and forged portable clamp parts. Accessories for adapting clamps to specific applications are available.

Write today for name of nearest distributor and your copy of the De-Sta-Co catalog which describes over 40 fixture and portable models with positive holding pressures up to 4000 pounds.

DESTACO DETROIT STAMPING COMPANY

360 MIDLAND AVE. • DETROIT 3, MICH.

For more details circle NED-318 D3 on enclosed inquiry slip

IMPROVED MODEL McCORD UNIT HEATER

The improved McCord Unit Heater incorporates every unit heater advancement that McCord engineers and the experience of thousands of users could suggest. The distinctive modern design with rounded corners combines improved appearance with greater strength and houses a heating unit that sets a new standard of heat transfer efficiency and quietness. The scientific design of the individual turbo spiral fin tube core provides even distribution of heated air at high velocity. The individual tubes prevent stresses due to unequal expansion. The entire heating unit is spring suspended and floats free in the casing eliminating rigid connections. Deep pitched fans provide high air delivery and quietness of operation.

This improved heater is a development of the experience gained from the thousands of McCord Unit Heaters in service. It combines good appearance with that inherent McCord quality of ruggedness and dependability that has made McCord the standard among many of the largest industrial users. You may also replace old leaking heaters using new McCord units and your old fan and motor. Write for new catalogs—Unit heaters and blast coil units. **McCord Corporation,** 2580 E. Grand Blvd., Detroit, Mich. —**Advt.**

▲ For more details circle **NED-319 D3** on enclosed inquiry slip ▲

THE Surest WAY TO FIND HIDDEN STRAY METAL

NEW USERS of Allis-Chalmers electronic Metal Detectors are usually surprised at the large number of pieces of stray metal detected in their packages. A typical comment is "It's a wonder we have any customers left."

Fortunately not all stray metal causes injury. And in most cases the customer never writes in about it. But your reputation suffers! Precautions lessen the problem, but the surest way to catch hidden stray metal — magnetic or non-magnetic—is with an Allis-Chalmers electronic Metal Detector. Metal particles .047 inch diameter and larger are detected.

Call your nearby Allis-Chalmers Sales Office for 20 page bulletin 7217, which shows the many ways of applying A-C electronic Metal Detectors. A-3080

Allis-Chalmers
Milwaukee 1, Wis.

ALLIS-CHALMERS

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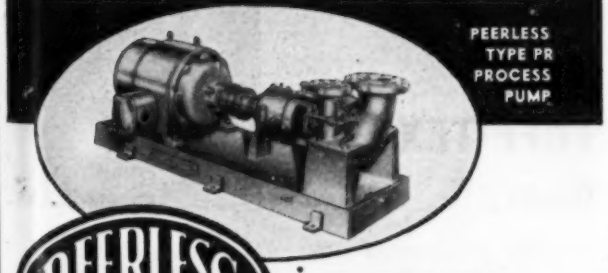
A CENTER-LINE-MOUNT PUMP FOR HEAVY DUTY SERVICE IN CHEMICAL PLANTS AND REFINERIES



PEERLESS PUMPS

SOME CHARACTERISTICS OF THE TYPE PR PUMP

CAPACITIES . to 1000 gpm
HEADS . . . to 625 ft.
TEMP. RANGE . to 850°F.
CASE PRESSURES to 600 psi
LIQUID END can be furnished in any suitable alloy

For Tough, High Temperature, High Pressure Pumping Jobs

Write today for new Peerless Bulletin No. B-1605. Completely describes and illustrates the modern Peerless process pump for handling hydrocarbons, water and chemical solutions at elevated temperatures and pressures.

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION

Los Angeles 31, California and Indianapolis 8, Indiana
Offices: New York, Chicago, St. Louis, Atlanta; Dallas, Plainview and Lubbock, Texas; Fresno, Los Angeles; Phoenix; Albuquerque, N. M.; Tulsa

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DOUBLE-ENDED BINS can serve two assembly lines

Two assembly lines, with operators working face to face, can be serviced by double-ended Stackbins mounted in Stackracks. Materials or components are accessible from both ends. Reloading can be done from either end or by replacing with a full unit. Bins and racks are built of heavy gage steel with index card holders on both ends. Finish is baked-on green enamel. Made by **Stackbin Corp.,** 1081 Main St., Pawtucket, R. I.

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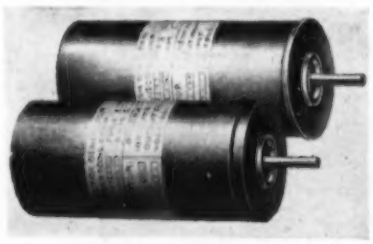
ABRASIVE CLOTH packaged in "match book" form

Handy, easy-to-use sheets of Jiffy abrasive cloth are packaged in "match book" form for use in cleaning of copper tubing and fittings before sealing. It can also be used for cleaning and polishing of other metals. Packaged cloth reduces waste, eases storage problems and eliminates unraveling of rolls. Made by **Pioneer Mfg. Co.,** 104 Merrimac St., Boston 14, Mass.

▲ For more details circle **NED-323 D3** on enclosed inquiry slip ▲

MINIATURE MOTOR-GENERATORS designed for 400-cycle operation



Phase voltage of the motor in miniature line of control motor - generator and motor-generator gear train combinations for servo - mechanisms is 26 v with a maximum stall power at 2.6 w per phase. Minimum stall torque is 0.3-in oz. The 400-cycle motor-generator weighs 4 oz and measures 0.9-in. diameter. Generator output is 0.34 v per 1000 rpm with an excitation power of 2.0 w maximum. Phase shift working into a 100,000 load is 5 degrees, maximum null is 20 mils and maximum swing is 10 mils. Made by **Transicoil Corp.,** Dept. NED, 107 Grand St., New York 13, N. Y.

▲ For more details circle **NED-324 D3** on enclosed inquiry slip ▲

FREE CATALOG... New Coated Abrasive Selector by CARBORUNDUM

Source: THE CARBORUNDUM COMPANY
Niagara Falls, New York

This new "Coated Abrasive Selector for the Average Grinding Job" helps you choose the right coated abrasive for any machine or hand abrasive operation—on metals, non-metallics, or wood.

The recommendations given are complete—including grain sizes and types, backings, coatings, product sizes, prices and packaging information. Metalworking recommendations include coated abrasives for hand, portable and disc sanding; and for contact wheel, platen, and slack-of-belt machine grinding. Recommendations for roughing, polishing, and finishing glass and other non-metallic materials are also shown. For woodworking, coated abrasives are listed for hand sanding and finishing, and machine sanding with the following types of sanders: oscillating, flat belt, edge, turning, moulding, drum, disc, and others.

A special section lists contact wheels—both solid and universal hub, serrated and plain. The "61" Port-A-Belt grinding attachments are also described fully. In addition, you will find a list of machine manufacturers—giving machine model numbers and belt sizes.

It's free! Get this handy catalog today. Write to Dept. NED 82-310.

"Carborundum" and "Port-A-Belt" are trademarks of The Carborundum Company, Niagara Falls, New York

82-310

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MYSTIK BRAND TAPES SELF-STIK New!

MYSTIK® BRAND

Corner Protectors!

These rubberized fiber Corner Protectors attach by their own adhesive to corners of metal sheets. Protect corners from damage. Prevent corners from scratching other surfaces or causing personal injuries. Save countless dollars of refinishing and replacement on finished work. Easy to attach. Stay on sheets during storage, transfer, fabrication. Write for information and free samples. Mystik Adhesive Products, 2657 N. Kildare, Chicago 39.

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WHICH can help improve YOUR Product Finishing?

WHAT'S YOUR PROBLEM? Special effects—faster drying—hiding defects? Eliminating primer—reducing inventories—more flexibility of finish for various surfaces and application methods? You'll find the answers to these problems and many others in the following brochures:

- ☐ **S-502**—Fast-Dri® Synthetic Enamel. Air-dry or bake. For metal or wood products.
- ☐ **FB-505**—Kem® Fast-Bake Enamel. For metal products. Interior or exterior end-use.
- ☐ **KL-511**—Kem Lustral® Enamel. Air-dry or bake. Spray, dip, brush. For metal, wood, interior, exterior.
- ☐ **L-503**—Opex® Industrial Lacquer. Very fast drying. For metal, wood, interior or exterior end-use.
- ☐ **AM-514**—Kem® Art Metal Synthetic Baking Enamel. A single-coat wrinkle finish, for metal products.
- ☐ **D-506**—Dimenso® One-Coat. Single-coat system for hammered or opalescent finishes. Air-dry, bake.
- ☐ **F-501**—Finishing Furniture and Wood Products.

Ask for these and other helpful brochures from your local Sherwin-Williams Branch. Consult your classified telephone directory. Or check brochures you want, and mail with coupon.

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for _____ Application
Name _____
Company _____
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UP THE LADDER...and DOWN

KELLER

Air Hoist

One man handles it easily... makes replacements quickly ... avoids "down time" that might keep a whole department idle.

VARIABLE SPEED with finger-tip control—spots loads accurately.

CAN'T BURN OUT from stalling. Not affected by dust and fumes. Maintenance costs are negligible!

Send for **illustrated descriptive bulletin and detailed information**

Keller Tool Company
GRAND HAVEN, MICHIGAN

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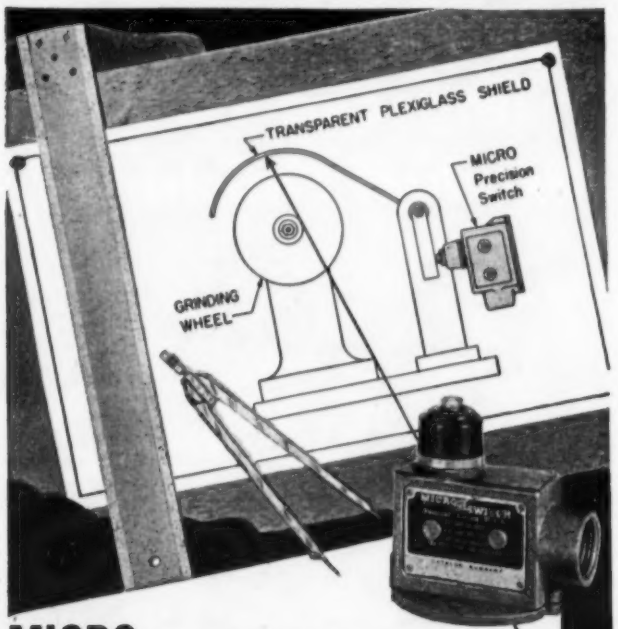


MICRO switch says "no grinding" unless protecting shield is over the wheel

HERE'S a safety use of a MICRO precision switch for almost any plant, protecting eyes and face of grinding wheel operators from flying particles.

Plexiglass shield is linked to the plunger actuator of the MICRO switch which only closes the power circuit when the shield is in the "down" position.

This application of a MICRO switch to a universal plant problem is just one of hundreds of uses that plant engineers, electricians and operating men are finding for these versatile switches.

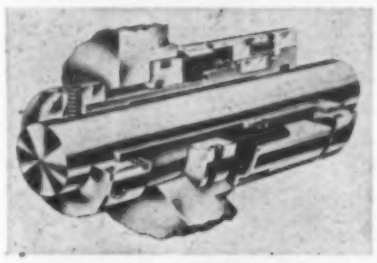
As limits, safeties and interlocks, they make existing equipment safer, more efficient and more productive. They are available for bottom and side mounting and with actuators to take any kind of actuating motion.

Ask for them at your local authorized MICRO distributor. You will find him under "switches, electric" in your classified telephone book. MICRO field engineers are located in principal cities, too, to assist in the solution of complex switch problems. Call your nearest MICRO branch office.

MICRO
MAKERS OF PRECISION SWITCHES
FREEPORT, ILLINOIS
A DIVISION OF
MINNEAPOLIS-HONEYWELL REGULATOR COMPANY

For more details circle NED-329 D3 on enclosed inquiry slip

MECHANICAL SEAL withstands 1000 psi pressure



Packaged type 8-B heavy duty mechanical shaft seal is designed to withstand pressures up to 1000 psi. When used with split-case pumps, it is not necessary to lift the upper half of the casing to install or remove the seal. Compact design adapts it for use in conventional pump stuffing boxes. It makes use of a rotating sealing washer and "floating" stationary seat. Balance is accomplished by lowering the washer face to a point where stuffing box pressure is not exerted against the sealing area. Made by **Crane Packing Co.**, Dept. N-9, 1800 W. Cuyler Ave., Chicago 13, Ill.

For more details circle NED-330 D3 on enclosed inquiry slip

POLISHING & BUFFING LATHE speed variable from 1500 to 3000 rpm

Model 10 VRO in line of polishing and buffing lathes is a heavier unit which has a 10 hp motor and incorporates variable speed drive. Speed range is from 1500 to 3000 rpm. Speed can be changed instantly while the lathe is running by turning a dial control. Made by **Hammond Machinery Builders, Inc.**, 1623 Douglas Ave., Kalamazoo 54F, Mich.

For more details circle NED-331 D3 on enclosed inquiry slip

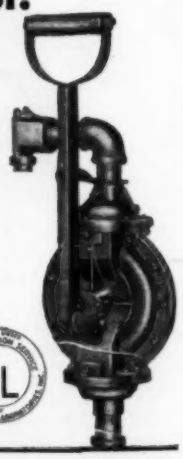
BRUSH CLEANER noninjurious to synthetic bristles

Paint hardened cellulose acetate brushes whose bristles are dissolved by regular brush cleaners can be effectively cleaned by Sterling Synthetic Bristle Brush Cleaner. Product is completely noninjurious to the synthetic bristles. Full information can be obtained by writing the manufacturer, **Sterling Paint & Varnish Co.**, 120 Commercial St., Malden 48, Mass.

For more details circle NED-332 D3 on enclosed inquiry slip

Every day more and more factory men tell us—

Tokheim hand pumps are safer, faster, more useful!



This double-action pump has no equal. Delivers 20 gallons per minute of most liquids. Stops wasteful dripping and slippery floors. Reduces fire hazard and accidents common to other methods of transfer. Handles a wide variety of liquids. Adaptable for drums, skid tanks and underground installations. Call your dealer, your Tokheim representative, or write the factory for literature.

QUALITY TOKHEIM DOUBLE-ACTION HAND PUMPS

A Tokheim will handle a variety of liquids

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General Products Division
TOKHEIM OIL TANK AND PUMP COMPANY
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT SINCE 1901
1656 WABASH AVENUE FORT WAYNE 1, INDIANA
Factory Branch: 1309 Howard Street, San Francisco 3, California

For more details circle NED-333 D3 on enclosed inquiry slip

Grinding Costs Slashed with Porter-Cable ABRASIVE BELT GRINDERS

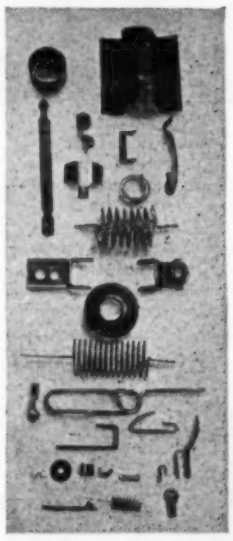
1. Initial Cost is lower
2. Installation Cost is less
3. Maintenance is minimized
4. Skilled labor is not required
5. Production is increased — labor cost on each job is cut
6. Inventory of milling cutters or grinding wheels is eliminated
7. Fixtures are less expensive, frequently eliminated
8. Polishing Time is greatly shortened
9. Machine Allowances can be reduced—thus saving material

PORTER-CABLE
Machine Co.
1404 N. Salina St., Syracuse 8, N. Y.
In Canada write:
Strongridge, Ltd., London, Ont.

Free! A 32-page fact-packed booklet with 46 examples of how Abrasive Belt Grinding ups output, slices costs.

For more details circle NED-334 D3 on enclosed inquiry slip

Priced Right! WIRE FORMS & *Metal Stampings*



High-speed, quality production with custom-made precision. Wire formed to any shape for every need.

IMMEDIATE CAPACITY FOR DEFENSE SUB-CONTRACTS

STRAIGHTENING & CUTTING
Perfect straight lengths to 12 ft.
.0015 to .125 diameter

WIRE FORMS
.0015 to .125 diameter

SMALL METAL STAMPINGS
.0025 to .035 thickness
.062 to 3 inches wide

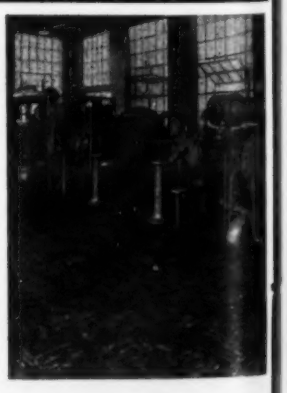
Specializing in Production of Parts for Electronic, Cathode Ray Tubes and Transistors

Write for illustrated folder. Send Blueprints or Samples for Estimate.

ART WIRE and STAMPING COMPANY
15 BOYDEN PLACE
NEWARK 2, N. J.

For more details circle NED-335 D3 on enclosed inquiry slip

Tough Areas call for TUFF-TEX* floors!



Tuff-Tex Greaseproof Industrial Tile completely answers the requirements of heavy-duty flooring. It's especially recommended for machine areas.

Tuff-Tex combines impact resistance with flexural strength. Metal chips, or constant rolling friction, can't hurt it. Tuff-Tex offers a wide range of rich colors and versatility of design ...both decorative and functional.

Send today for folder, "Tuff-Tex Greaseproof Industrial Flooring" ... or see your Tile-Tex* Contractor, listed in classified pages of phone book. Ask him about FLEXACHROME*, too.

THE TILE-TEX DIVISION, The Flintkote Company, 1234 McKinley Street, Chicago Heights, Illinois

Tile-Tex—Pioneer Division, The Flintkote Company, P. O. Box 2218 Terminal Annex, Los Angeles 54, Calif.

The Flintkote Company of Canada, Ltd., 30th Street, Long Branch, Toronto, Canada

*Registered Trademark, The Flintkote Company

TUFF-TEX GREASEPROOF INDUSTRIAL TILE

For more details circle NED-336 D3 on enclosed inquiry slip

Specify ESSEX EXTRA TEST TEFLON MAGNET WIRE

WIRE SX PRODUCTS

for Your Highest Temperature Applications

★ CAN WITHSTAND 250° C for short periods of time; or 200° C continuously.

★ SUPERIOR RESISTANCE to acids, solvents, chemicals and moisture.

★ GOOD SPACE FACTOR, flexibility and abrasion resistance.

Teflon is the DuPont trademark for Polytetrafluoroethylene enamel.

ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

WAREHOUSES* AND SALES OFFICES: *Atlanta, Ga.; *Boston, Mass.; *Chicago, Ill.; Cleveland, Ohio; Dallas, Texas; Dayton, Ohio; *Detroit, Mich.; Indianapolis, Ind.; *Kansas City, Mo.; *Los Angeles, Calif.; Milwaukee, Wis.; *Newark, N.J.; *Portland, Ore.; Upper Darby, Philadelphia, Pa.; *St. Louis, Mo.; *San Diego, Calif.; San Francisco, Calif.

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7 CHECKS FOR A GOOD GEARMOTOR

1 Split Housing . . . Assures easy access to working parts without disturbing alignment or draining oil.

2 Integral Bearing Supports . . . Antifriction bearings mounted direct in rigid housing, not in end brackets, mean permanent alignment of gear shafts—maximum overhung load capacity.

3 Precision Helical Gears . . . Hobbed and shaved after heat-treatment mean quieter, smoother operation—maximum load-carrying capacity.

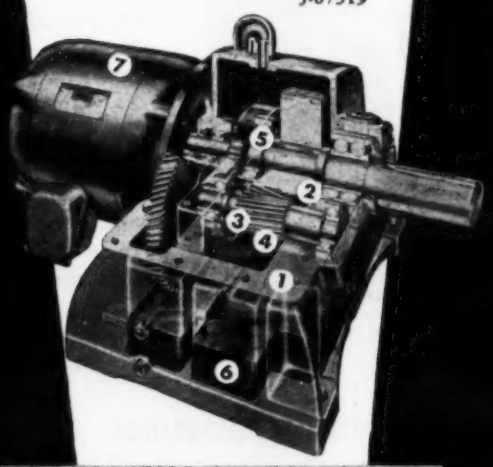
4 Taper-Hardened Gears . . . Tapered hardness from surface to core assures extremely tough, wear-resisting teeth—means longer life.

5 Integral Motor Design . . . Drive pinion mounted on motor shaft—no coupling to align and service—means fewer wearing parts, minimum maintenance.

6 Engineered Lubrication . . . Circulating splash system, protected-type breather, positive mechanical oil seals—mean thorough, leakproof lubrication.

7 Life-Line Motor . . . Pace-setting, industry-proved, compact steel motor with sealed-for-life bearings—means maximum motor dependability.

To get all these features, plus undivided responsibility for motors and gears, specify Westinghouse Life-Line Gearmotors. For more information, call in your Westinghouse representative. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna. J-07319

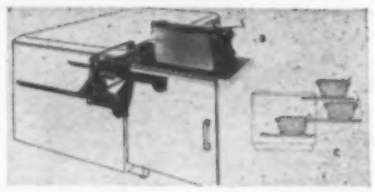


YOU CAN BE SURE... IF IT'S Westinghouse

Life-Line GEARMOTORS

▲ For more details circle NED-338 D3 on enclosed inquiry slip ▲

TYPEWRITER DESK
machine is easily raised, lowered



A gentle pull forward from the pedestal is all the secretary must do to bring the typewriter platform of the Streamliner Soundguard steel desk into typing position. Concealed latches hold the platform rigidly in typing position and prevent accidental lowering. This operation, and lowering by pressing on the release bar on the platform top, can be easily performed from a sitting position. The platform with typewriter lowers, same as it raises, in an arc swing. It is then pushed back into the pedestal. Ample clearance precludes need for centering of typewriter carriage before lowering. Made by **Globe-Wernicke Co.,** Dept. T, 5028 Carthage Ave., Cincinnati 12, O.

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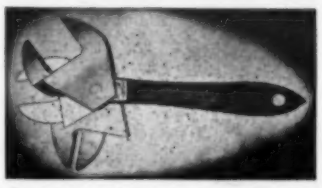
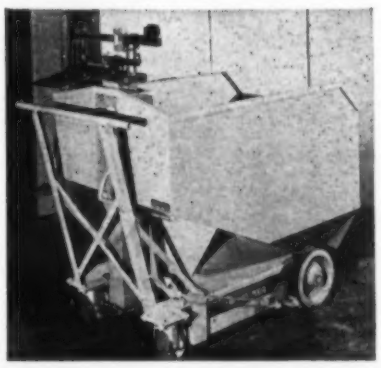
AUTOMATIC WRENCH
adjusts to any ¼ to 1¼-in. nuts



Capable of automatically adjusting its jaw size to fit any ¼ to 1¼-in. nut, this Plattina self-adjusting wrench is easy to use. Ratchet-like action permits jaws to be slipped quickly for tightening or loosening. Head rotates approximately 130 degrees on end of handle, and the knurled jaws open or close, depending upon direction of turn. Grip tightens as pressure is applied. This German-made tool is forged from chrome vanadium steel. Distributed by **Fuller & Hellmann, Inc.,** Dept. NED, Moro, Oreg.

▲ For more details circle NED-340 D3 on enclosed inquiry slip ▲

BULK MOVER & SCALE
hopper built on platform scale



Free-Wheeling construction of the Eze-Move bulk scale allows it to be pushed about from one location to another with effortless control. Basically, unit consists of large capacity, heavy steel hopper built on Fairbanks-Morse portable platform scale. Material is quickly and easily dumped into hopper, weighed and then discharged through dump gate. Made by **Burrows Equipment Co.,** 1316-NE Sherman Ave., Evanston, Ill.

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PIC of the Pack!

New Equipment Favorites — 100% Zinc Plated

PIC STEEL UNIONS*

Just the union for makers of original equipment, Pics are bright, good looking . . . and speed assembly and installation of your machines. Open end wrenches can be used because ends are uniformly flat-sided, uniformly parallel. Ends are strong, too — of heavy steel pipe coupling stock. Special wedge type bronze seat assures tightness. Zinc plating (even on threads) for maximum rust protection. And the best news is Pics cost *less* than a galvanized, *no more* than a black malleable union!

*For 150# Service... Write for FREE SAMPLES

DART UNION COMPANY
132 THURBERS AVENUE, PROVIDENCE 5, R. I.

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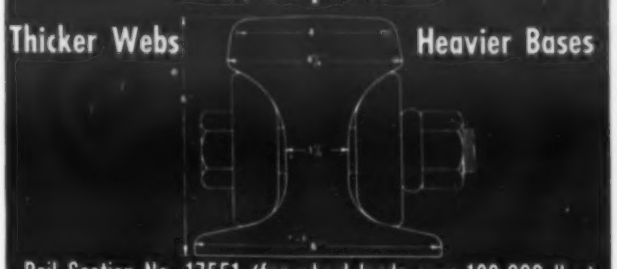
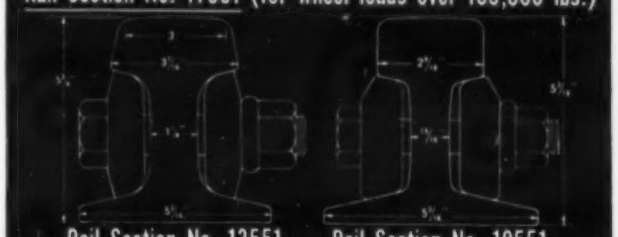
These
SPECIAL CRANE RAIL SECTIONS
assure longer life under heavy wheel loads

Wider, Deeper Heads

Thicker Webs — Heavier Bases



Rail Section No. 17551 (for wheel loads over 109,000 lbs.)



Rail Section No. 13551 (for wheel loads 80,000 to 109,000 lbs.)

Rail Section No. 10551 (for wheel loads up to 80,000 lbs.)

FOR DETAILS, SEND FOR OUR FREE BOOKLET. It describes a special technique of tight-joint assembly and a fastening which allows for rail "Float." Write to United States Steel Corp., Room 2810-U, 525 William Penn Place, Pittsburgh 30, Pa. 3-496

UNITED STATES STEEL

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At left: Jacketed 3-Way Plug Cock.

Below: Cutaway section of Jacketed Cock, showing packing gland construction.

H&B ESTABLISHED 1887

Jacketed Pipe, Pumps, Valves and Fittings . . .

Regardless of whether the material is being heated or cooled in the processing, and what heating or cooling medium is being used, H & B jacketed fittings are available for all applications. Steam, hot water or hot oil may be used for heating, cold water or brine for cooling.

H & B can save you money on your jacketed pipe and fitting requirements because we buy all standard size pipe from the mill in carload lots, make our own special flanges in quantities, and are tooled up for making jacketed equipment at lowest possible price. Write for Bulletin J-50.

Hetherington & Berner Inc.
751 Kentucky Avenue • Indianapolis 7, Indiana

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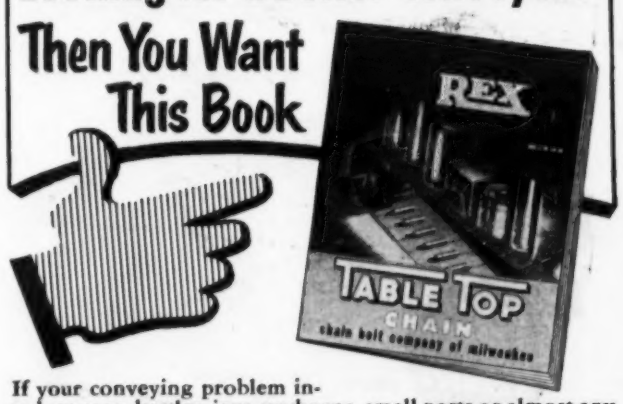
Looking for a Better Conveyor?
Then You Want This Book



If your conveying problem involves cans, bottles, jars, packages, small parts or almost any other small unit, you'll want this new book on Rex TableTop® Chain. The book explains all the advantages of TableTop's simplicity...how it reduces maintenance...speeds production ...helps cut conveying costs.

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REX® Chain Belt COMPANY OF MILWAUKEE

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Milwaukee 1, Wisconsin
Please send me TableTop Chain Bulletin 53-60.

Name.....
Company.....*Dept*.....
Address.....
City.....*State*.....

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FOR TESTING
Screws, thread-cutting and thread-forming screws—all types of threaded fasteners; threaded parts and threaded connections.

FOR MANUFACTURERS
DESIGNERS
INSPECTORS
TOOL ENGINEERS
LABORATORIES and for
PRODUCT CONTROL
in assembly.

Capacities: (0-200 in. lbs.) or (0-150 ft. lbs.)

Write for Bulletin TTF

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

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BOOST PRODUCTION

COBURN

OVERHEAD CONVEYING EQUIPMENT

Meet today's need for maximum plant production, increased efficiency and faster handling of materials with Coburn Overhead Conveying Equipment. It gives you unobstructed floor space, requires very little headroom, makes it easy to spot work directly over machines. Loads up to 3000 lbs. handled by hand chain or electric hoist; power-operated equipment also available.

For additional information write to Sales and Engineering, 56 Sterling St., Clinton, Mass., or consult your classified telephone directory. Write today for catalog #220.

EAST: Wickwire Spencer Steel Division, Clinton, Mass.
WEST: The Colorado Fuel & Iron Corporation, Denver, Colorado
PACIFIC COAST: The California Wire Cloth Corporation, Oakland, California

COBURN PRODUCTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

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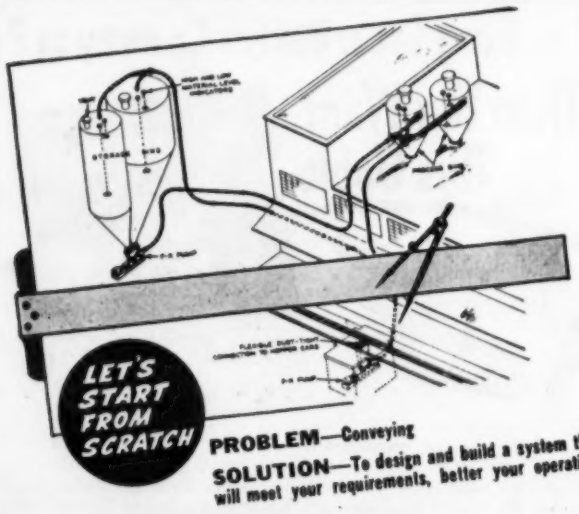

PROBLEM—Conveying
SOLUTION—To design and build a system that will meet your requirements, better your operation

Fuller Company designs and manufactures four primary types of pneumatic conveying systems for dry pulverized and granular materials. This permits the selection of the system best adapted to specific requirements—best equipped to handle most efficiently the materials being conveyed.

Each job is considered separately. That's why we say "Let's start from scratch" . . . when the plant is in the design stage. Then a preliminary study of local conditions can be made—and the proper equipment and layout recommended by specialists in the field of pneumatic conveying. We strongly urge all prospective purchasers to avoid preliminary engineering and to permit us to submit a recommendation or engineering study.

Fuller has a tangible resource in a personnel with many years of experience in all phases of pneumatic conveying. Fuller engineers are at your service to make a study of your requirements and to make a recommendation. There is no obligation, of course.

G67A

Fuller

FULLER COMPANY, Catasauqua, Pa.
120 S. La Salle St., Chicago 3
420 Chancery Building, San Francisco 4

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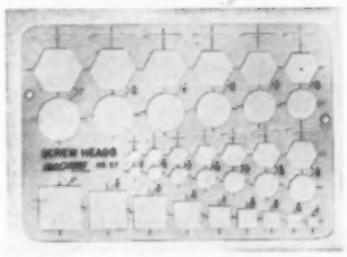
SCREW HEAD TEMPLATE
speeds drawing of side and top views



Drawing of hexagon and square screw heads and nuts in top and side views can be speeded by use of No. 57 screw heads template. Range is from ¼ to 1 in. across the flats. Thirteen hexagons are in 1/16-in. increments and 13 circles to serve as tangent or chamfer circles for hexes or as screw body diameters are included. Additional 13 cut-outs and chamfer crescents aid in drawing hexagon side views, while nine square cut-outs are for square heads and nuts. Template is made of 0.030-in. matte finish mathematical quality plastic and measures 7⅜ x 5 in. Price is $2. Made by **Rapidesign, Inc.**, P. O. Box 592A, Glendale, Calif.

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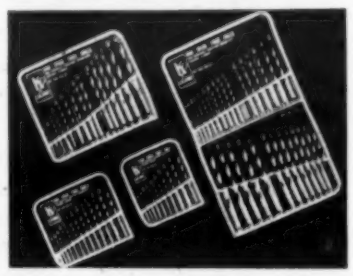
PACKAGED TWIST DRILLS
protected by plastic containers



Conveniently packaged in blue and yellow imprinted vinyl plastic containers, sets of K-Line high speed twist drills are protected from damage, and drills are accessible for use. Variety of sets is available in sizes from 1/16 to ½-in. in increments of 1/32 and 1/64-in. Distributed by **Basic Manufacturers' Representatives, Inc.**, Dept. NED, 6565 Main St., Buffalo 21, N. Y.

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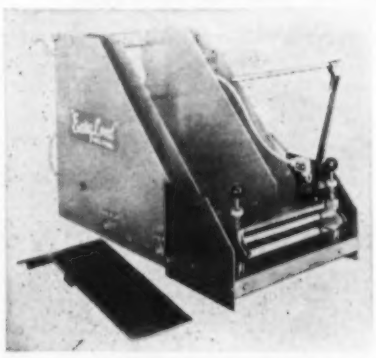
COIL CRADLE DRIVE
feeds extremely thin stocks



Thin or thick stocks, lamination materials and spring tempered stocks as well as strip from egg-shaped rolls are fed positively by this pinch roll drive attachment for Easy Load automatic coil cradles. Linkage between the cradle rolls and the pinch rolls provides braking action on body of coil when motor is shut off. Loading is simple operation. Complete installation kit is furnished with attachment. Made by **Rowe Machinery & Mfg. Co.**, 1508 N. Industrial Blvd., Dallas, Tex.

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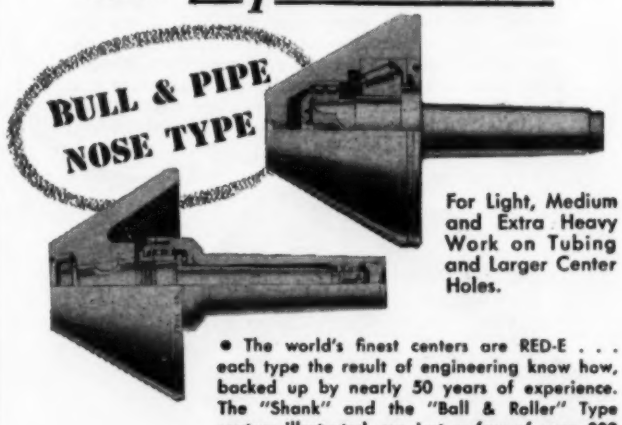
only RED-E Anti-Friction CENTERS are Superaccurate!



For Light, Medium and Extra Heavy Work on Tubing and Larger Center Holes.

• The world's finest centers are RED-E . . . each type the result of engineering know how, backed up by nearly 50 years of experience. The "Shank" and the "Ball & Roller" Type centers illustrated are just a few of over 200 exclusively designed centers available.

Ask for Catalog "B" (Pipe and Bull Nose Centers). "C" (Anti-Friction Centers). "D" (High Speed—Carbide Tipped Centers).

CENTER *Specialists Since* 1908

RED-E TOOLS READY TOOL COMPANY
561-Iranistan Ave. • Bridgeport 5, Conn.

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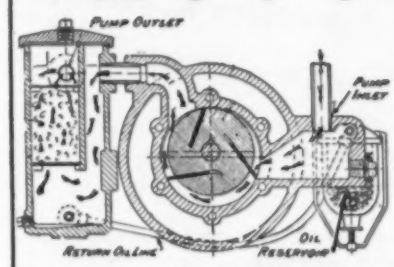
USE THIS COMPACT MOTOAIR PUMP FOR VACUUM

AVAILABLE IN SEVERAL SIZES



No other pump, so compact, provides such dependable vacuum in so little space. Less parts to wear because

NO BELTS
NO GEARS
VISIBLE LUBRICATION

The unique design illustrates points which appeal to machine designers. Used for years on packaging and graphic arts equipment, web-guiding, etc.

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NEW JERSEY MACHINE *Corporation*

FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES

1550 WILLOW AVENUE, HOBOKEN, N. J.

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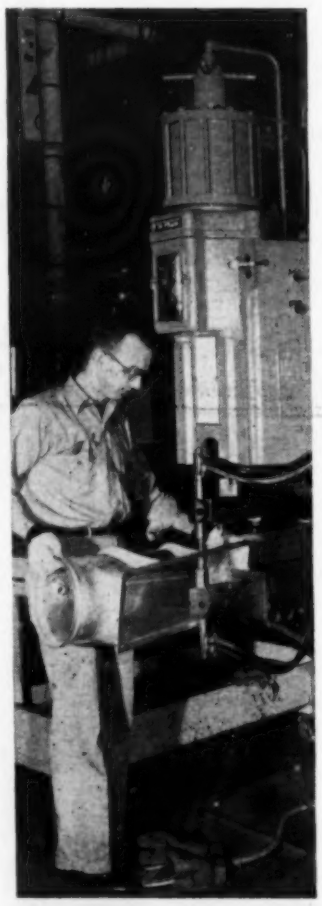
MEETING MILITARY SPECS IS AN OLD STORY FOR T-W USERS



Specifications Mil-W-6860 and 6858 (formerly AN-W-30 and 32) and Taylor-Winfield resistance welding equipment have been partners for years.

From Taylor-Winfield you can have the efficient Tri-Phase DC or Single Phase Spot and Seam AC welders in many sizes and styles. From Taylor-Winfield you can obtain all the engineering data or field assistance you need to meet your problem, and the welders to do the job.

Let T-W know your requirements. Write, wire or phone.

RESISTANCE WELD

AIRCRAFT FRAMES
JET ENGINE PARTS
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PROJECTILES
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CONTAINERS
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ALUMINUM ALLOYS
STAINLESS STEELS
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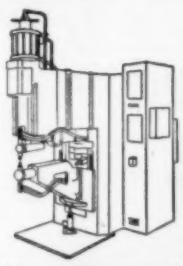

TAYLOR-WINFIELD
RESISTANCE WELDERS

Resistance Welders Since 1883

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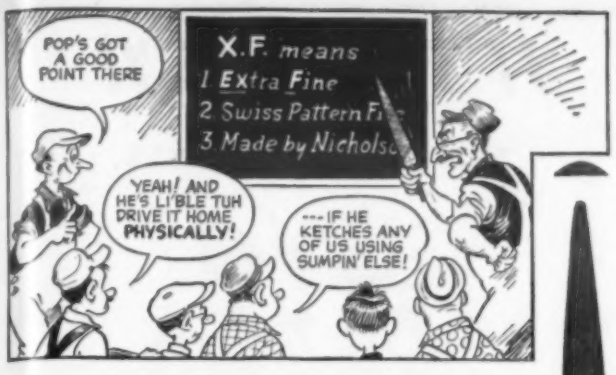

THEY can't put anything over on Pop. He knows (as most good foremen know) that where there's precision filing to be done, there are specially precise files for doing it, viz.: Nicholson X.F. Swiss Pattern Files. He knows, too, that "X.F." means "*Extra Fine*." And for good reason: With 89 years' file-making experience and more Swiss Pattern production than any other manufacturer in America, Nicholson can well be expected to turn out the absolute tops in quality.

SOLD THROUGH INDUSTRIAL DISTRIBUTORS in all popular individual types; and in such special groups as Die Sinkers Files, Round and Square Handle Needle Files, Filing Machine Files; Silversmiths and Die Sinkers Rifflers. FREE CATALOG.

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(In Canada, Port Hope, Ont.)

NICHOLSON ... a file for every purpose

High tiering eight palletized rolls

250% Gain in Storage, using ELWELL-PARKER Trucks

At a prominent textile finishing plant, Elwell-Parkers high stack 54 palletized rolls of cloth in the space previously occupied by 15.

Carloading Time Cut from 28 to 1⅓ Man-Hours—At this same plant, it formerly took 3½ hours for 8 men with hand trucks to load a boxcar. Now, the E-P truck operator with one helper does job in 40 minutes—*only 5% of previous man-hours!*

To learn about the savings in man power and storage space being made by Elwell-Parker trucks in over 300 different industries, send for:—

***FREE BOOKLET** on Scientific Materials Handling. Ask for a copy of "Industrial Logistics".*

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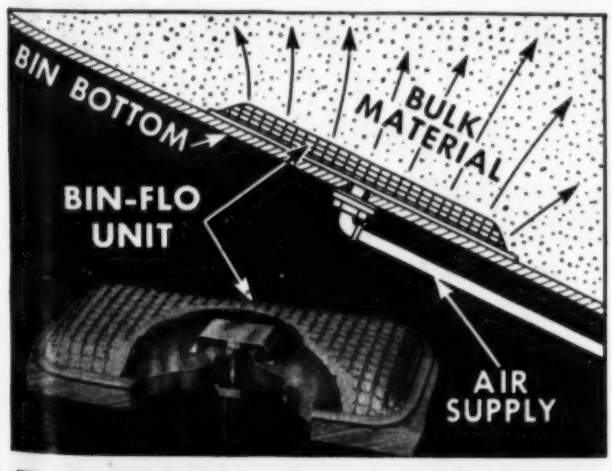

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KEEPS BULK MATERIALS MOVING

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BIN-DICATOR bin level indicator—"The Eyes of the Bin"—automatically reports levels of materials in storage; automatically controls filling machines; prevents waste.

NEW 20-PAGE BOOK FREE

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

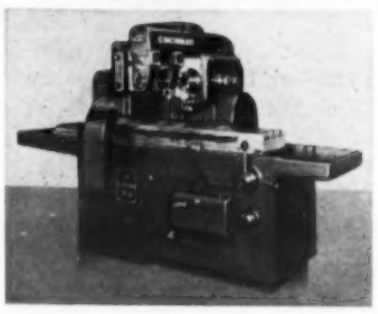
For more details circle NED-356 D3 on enclosed inquiry slip

PNEUMATIC TRANSMITTER combined with pressure gage

High degree of accuracy is achieved by this pressure pneumatic transmitter as it is calibrated with comparison of actual pressure applied to the gage versus transmitted air. Output pressure of the transmitter varies from 3 to 15 psi (or 5 to 25 psi, if specified) regardless of the range of the pressure being measured. AA grade gages are used in either 6 or 8½ in. sizes with Bourdon springs available in a wide variety of materials. Ranges from vacuum to 10,000 psig are available. Use can be with either full size recording receivers of miniature indicating instruments over distances up to 1000 ft. It is suitable for panel, pedestal or wall mounting. Made by **Penn Industrial Instrument Corp.**, Dept. 33, 4110 Haverford Ave., Philadelphia 4, Pa.

For more details circle NED-357 D3 on enclosed inquiry slip

MILLING MACHINES line includes three styles for automatic production operations



Several advanced production features are incorporated in this line of No. 2-24 automatic milling machines. They are built in plain, duplex and plain rise-and-fall (illustrated) styles. They are powered at the spindle by 3 or 5-hp motors. Standard table travel is 24 in., with longer table travel up to 144 in. available for long, comparatively light work.

Automaticity and manual maneuverability have been combined to a high degree. Through a cycle selector unit, a single lever initiates the entire milling operation, including automatic table cycle, automatic spindle stop, automatic backlash eliminator, automatic spindle carrier and automatic spindle retraction. All these automatic features can be nullified or by-passed to aid in setting up the machine.

Rapid traverse is at rate of 300 ipm, and sixteen table feeds range from ½ to 20 ipm. Twenty spindle speeds are 30 to 1200 rpm, while vertical feeds for the spindle carrier are infinitely variable from 1 to 40 ipm through dial control. Adjustable stops can be set to engage any portion of the 8-in. vertical range. Made by **Cincinnati Milling Machine Co.**, Marburg & South Sts., Cincinnati 9, O.

For more details circle NED-358 D3 on enclosed inquiry slip

Log-Edger Feed-Rolls lifted by NOPAK Cylinder

controlled by NOPAK 3-Way Air Valve

This Pacific Coast type log edger, manufactured by Albany Machine & Supply Co., Albany, Ore., employs an 8" NOPAK Model "D" Single Acting Air-Cylinder to lift the heavy feed-rolls by means of lever arms. This permits feeding of various sized cants as required. The cylinder is actuated by a ¾" NOPAK, 3-Way Air Valve, equipped with lever extension-bar enabling the operator to manipulate it from any point in front of the machine. Weighted valve lever when released lowers rolls to "feed" position. Springs keep feed rolls from dropping full length of cylinder stroke when machine is "empty."

This comparatively simple application may suggest how you can employ NOPAK Valves and Cylinders in your plant or product to actuate and control machine movements.

GALLAND-HENNING NOPAK DIVISION
2755 S. 31ST STREET • MILWAUKEE 46, WISCONSIN

Refer to Sweet's File for Product Designers or write for Bulletin SW-1.
Representatives in Principal Cities

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

A 7466-1/9AA

For more details circle NED-359 D3 on enclosed inquiry slip

Set up Fume Ventilation yourself with SPIRATUBE®

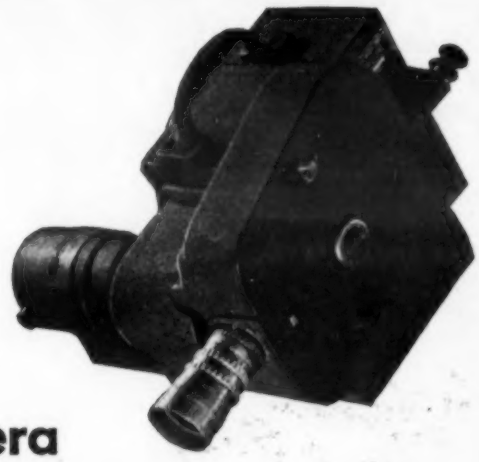
SPIRATUBE's design qualities make it ideal for portable and semi-permanent ventilation service, fume removal, all dust collection systems. It has the greatest flexibility and retractability. Sections of SPIRATUBE link together or detach in 10 seconds! No tools needed, no parts to get lost. Nothing could be simpler. And most important, YOU CAN INSTALL SPIRATUBE YOURSELF. Whatever your ducting requirements, FLEXIBLE's line of tubing will meet them better, cost less.

WRITE TODAY for this Illustrated Booklet

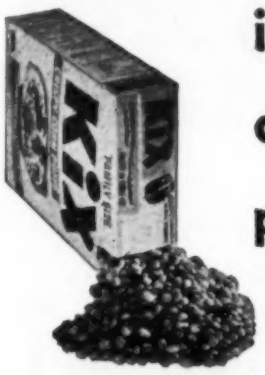
Flexible Tubing CORPORATION
Guilford, Connecticut Pasadena 1, California

For all ducting systems: FLEXFLYTE® SPIRATUBE® AYRTUBE®

For more details circle NED-360 D3 on enclosed inquiry slip



This camera helped General Mills improve a puffing gun



It's a tough job to improve control equipment for a part that is hidden by steam and product—and moves too fast to see.

General Mills engineers were faced with this problem in improving the operation of the "muzzle" cover on their cereal-puffing gun. To slow the event and see just what happens, they used their Kodak High Speed Camera. From the 16mm films it took, they got the quantitative information needed to design proper controls.

The Kodak High Speed Camera takes up to 3200 pictures a second. When the film is projected at normal speed on a standard projector, action is slowed as much as 200 times. An argon timing lamp makes it easy to get an accurate time check. And the films can be shown over and over again, stopped at important frames for detailed study and analysis.

If you have a design or performance problem that's hidden in a blur of speed, it will pay you to investigate the Kodak High Speed Camera. Our engineers will gladly help you determine its suitability to your problem. For further information or a booklet, "Magnifying Time," write to:

Industrial Photographic Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

the Kodak HIGH SPEED Camera Kodak

For more details circle NED-361 D3 on enclosed inquiry slip

STANDARDIZE with OHIO Stock Distributors

• Call him, he is engineered to keep your plant and product moving.

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Hardware & Supply Co.
*Baltimore 2, Md.
L. A. Benson Co., Inc
*Brooklyn 6, N. Y.
(Gears) Northside Leather Belting Co.
*Buffalo, N.Y.
*S. H. Pooley Belting Co.
F. E. Allen Co.
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*Cincinnati 14, Ohio
Metzger Machine Co.
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(Gears) Crown Industrial Sup.
Houston 3, Texas
Behring's Bearing Service, Inc.
*Indianapolis 2, Indiana
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Seeco Engr. & Supply Corp.
*Los Angeles 21, Calif.
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*Massillon, Ohio
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*Memphis 2, Tenn.
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*Miami 9, Fla.
General Equip. & Supply, Inc.
Milwaukee 11, Wisc.
A. F. Korf Co.
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Industrial Supply Co., Inc.
*Muskegon, Mich.
Lakeshore Machinery & Supply Co.
*New Orleans, La.
*(Gears) R. J. Tricon Co., Inc.
*(Reducers) Woodward Wight & Co., Ltd.
*New York, N. Y.
*(Reducers) Patron Trans. Co., Inc.
*(Gears) Atlantic Gear Works
*Paterson 4, N. J.
(Gears) Bernstein Bros., Inc.
Pawtucket, Rhode Island
George G. Pragst
*Philadelphia, Pa.
*Robert L. Latimer Co.
*Rothman Belting & Equip. Co.
*Piqua, Ohio
Bornell Supply Co.
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Standard Machinists Supply Co.
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J.W. Minder Chain & Gear Co.
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*St. Louis 4, Missouri
The Essmueller Co.
*Syracuse, N. Y.
U. & S., Inc.
*Toledo 12, Ohio
G. & J. Supply Co.
IN CANADA, *Montreal, Quebec,
John Braidwood & Sons, Ltd.

ESTABLISHED 1915 *Stocks Carried.

THE OHIO GEAR COMPANY
1320 EAST 179th STREET • CLEVELAND 10, OHIO

OHIO GEARS

▲ For more details circle NED-362 D3 on enclosed inquiry slip ▲

MAY-FRAN

AUTOMATIC SCRAP REMOVAL PAYS OFF!

CHIP-TOTE...
ELIMINATES MACHINE DOWN-TIME AT THOMPSON PRODUCTS, INC.

Machines produce more when MAY-FRAN CHIP-TOTES permit continuous operation. CHIP-TOTE automatic scrap conveyors remove borings, turnings and chips from high-production machine tools while they are operating . . . thus eliminating shut-down for manual scrap removal.

At Thompson Products, Inc., Cleveland Plant, CHIP-TOTES speed production by continuously conveying the large volume of chips generated by Sundstrand automatic lathes from machine to tote boxes. Operating speed of the CHIP-TOTES is synchronized with metal removing capacity of lathes to assure steady jam-free flow of scrap. In addition, the CHIP-TOTES provide for drainage and return of coolant.

Write today for the new CHIP-TOTE Bulletin MF-640

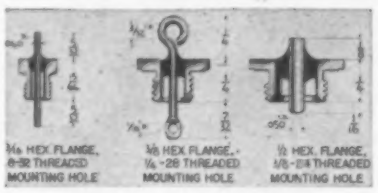
1106-MF

MAY-FRAN ENGINEERING, INC.

1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

▲ For more details circle NED-363 D3 on enclosed inquiry slip ▲

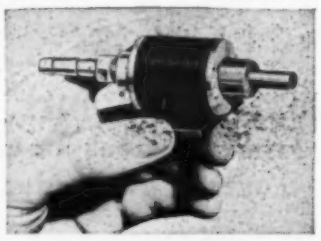
INSULATED TERMINALS have threaded bushings for assembly



Applicable where soft soldering cannot be used, three models of electrical feed-through terminals have threaded bushings. Terminals are screwed into corresponding threaded holes in equipment or components, or they are inserted through a hole in light gage materials and pulled tight with a jam nut. Mechanical joint affords safeguard in solderable applications where vibration is a problem. Sizes are 8-32, 1/4-in.-28 and 3/8-in.-24. Dielectric strength is 1000 v rms. Made by **Fusite Corp.**, Dept. NED, 6000 Fernview Ave., Cincinnati 13, O.

▲ For more details circle NED-364 D3 on enclosed inquiry slip ▲

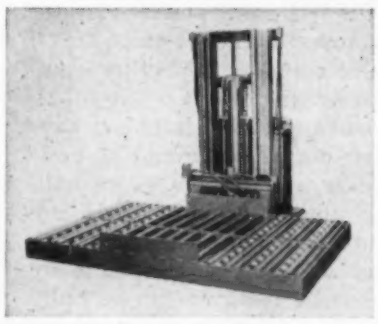
SMALL AIR CYLINDER delivers 75 lb thrust



With a 1-in. stroke and equal ram pressure at any given point in the stroke, Micro model air cylinder can be used on small jigs and fixtures where size and space limitations are factors. It delivers 75-lb thrust on a 100-psi line. Any number of the solid brass cylinders can be operated by a single control valve. Made by **Air-Mite**, 2651-B W. Lake St., Chicago 12, Ill.

▲ For more details circle NED-365 D3 on enclosed inquiry slip ▲

ROLLER PLATFORM handles boxes of metal sheet

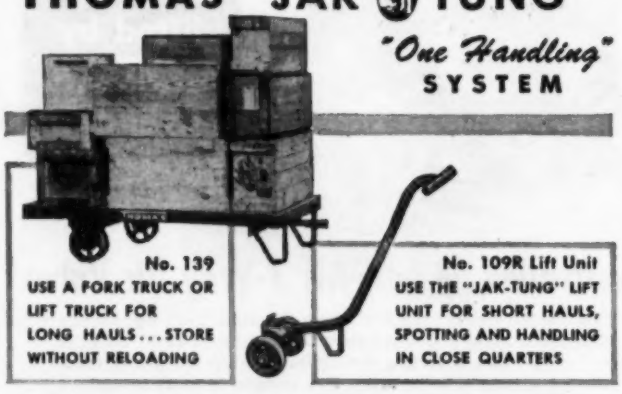


Unwieldy boxes of stainless steel or aluminum sheet can be handled from truck to storage or vice-versa by this hydraulically operated four-way roller platform adaptable to JackStacker industrial truck. Platform is first drawn up into vertical position for engaging the packaged steel with steel retaining plate. It is then swung down into horizontal position, as shown, for transporting and racking. One set of rollers centers load on platform, positioning it for easy racking, then lowers to allow moving load into storage racks on other set of rollers. Attachment will handle from 1200 to 1500 lb loads. Made by **Lewis-Shepard**, Dept. R-1, Watertown 72, Mass.

▲ For more details circle NED-366 D3 on enclosed inquiry slip ▲

FOR HAND OR POWER OPERATION

THOMAS JAK TUNG "One Handling" SYSTEM



No. 139
USE A FORK TRUCK OR LIFT TRUCK FOR LONG HAULS... STORE WITHOUT RELOADING

No. 109R Lift Unit
USE THE "JAK-TUNG" LIFT UNIT FOR SHORT HAULS, SPOTTING AND HANDLING IN CLOSE QUARTERS

Move and store your loads without rehandling. Save time and manpower . . . storage and handling space with a THOMAS "JAK-TUNG" SYSTEM. Photo at right shows a "JAK-TUNG" truck being used with a Power Fork Truck and a "JAK-TUNG" Lift Unit for faster, more efficient handling, without loading and unloading. Truck capacities from 1750 to 6000 lbs. Can be "Job-Suited" to your needs with many THOMAS Superstructures. Available with special hitch for trailer train operation.

THOMAS TRUCK AND CASTER COMPANY
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IT'S SO EASY! to SHARPEN SMALL DRILLS

Black Diamond PRECISION DRILL GRINDER

✓ INDUSTRY'S FIRST CHOICE
✓ SIMPLE TO OPERATE
✓ PRECISION RESULTS
✓ LOW-PRICED

Write to:
BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

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CESCO RIGHT... before your Eyes!

CHICAGO EYE SHIELD COMPANY • 2322 Warren Blvd. • Chicago 12, Ill.

CESCO FOR SAFETY

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TAPER-LOCK BUSHINGS WITH WELD-ON HUBS

NOTHING ELSE LIKE IT!

FOR your sprockets, gears, clutches, motors, impellors — for wheels of all kinds where service conditions are *really rugged*—there is nothing like TAPER-LOCK. This famous patented bushing—supplied for your use with matching TAPER-LOCK Weld-on Hub — gives you an easy-mounting, true-running unit that locks to the shaft with firmness equivalent to a shrunk-on fit. *WRITE* for special bulletin A-420A with specifications and entire range of shaft sizes (1/2" to 10").

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE of Mishawaka, Ind.

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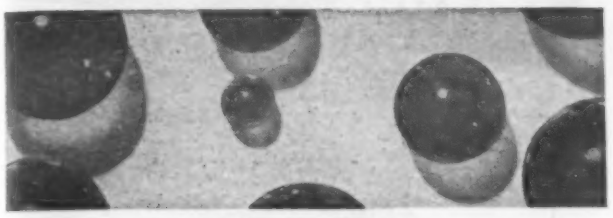
NOW—Precision Balls of Synthetic Sapphire



These balls of synthetic sapphire, polished to within 20 micro-inches of sphericity, are resistant to wear, heat, and corrosion. In many applications they need not be lubricated.

Available in 1mm, 1/16 inch, 1/8 inch, and 1/4 inch sizes, and in three surface finishes.

PROPERTIES

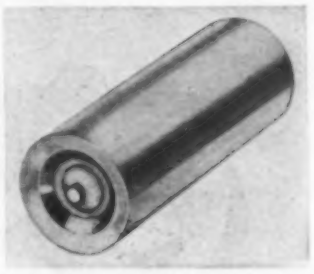
Coefficient of Friction	0.140
Hardness (Knoop)	1525-2000
Dielectric Constant	7.5-10
Modulus of Rigidity	21.5-27.5 x 10^6psi
Thermal Coefficient of Expansion at 50°C (per°C x 10^6)	5.0-6.7
Chemical Resistance	Unaffected by acids, dilute alkali.

Call or write any LINDE office for information on these balls or the other forms of synthetic sapphire.

LINDE AIR PRODUCTS COMPANY
A Division of Union Carbide and Carbon Corporation
30 East 42nd St. UCC New York 17, N. Y.
In Canada: Dominion Oxygen Company, Limited, Toronto

▲ For more details circle NED-371 D3 on enclosed inquiry slip ▲

ULTRASONIC DELAY LINES
frequency range is 5-100 mc



Cylindrical shaped fused quartz ultrasonic delay line pictured, one of a series with delay time values from 5 to 1500 microseconds, is in the 5 to 50 microsecond range. Frequency range is from 5 to 100 mc and stability is plus or minus 2 per cent between −35° and plus 85° F. Electrical energy is converted into sound energy, passed through the fused quartz and reconverted into electrical energy in the delay lines, adaptable to distance measuring equipment, automatic machinery, communication systems and other applications. Made by **Bliley Electric Co.**, Union Station Bldg., Erie, Pa.

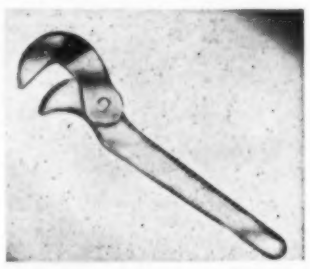
▲ For more details circle NED-373 D3 on enclosed inquiry slip ▲

ELECTRIC HAND DRYER
incorporates ozonating system

Hands can be dried in 18 seconds with the model CR-3 American dryer, a wall-mounted unit which incorporates a General Electric ozonating system to destroy objectional odors. Unit is push-button started and stops automatically. It measures 10⅛ x 11⅞ x 6½ in. and is chrome and porcelain enamel finished. Both face and hands can be dried, as the drying nozzle revolves 360 degrees. Made by **Dryer Co. of America**, Cor. Juniper & Locust, Philadelphia 7, Pa.

▲ For more details circle NED-374 D3 on enclosed inquiry slip ▲

PLY WRENCH
has three-sided pulling power



Made of high carbon steel, this ply wrench automatically adjusts to any size from 1/8 to 1⅛ in. Its one-way teeth minimize slippage. Wrench is designed for three-sided pulling power. Only 7 in. long, it can be used in cramped locations. Wrench is distributed by **Faver, Inc.**, Dept. NED, 4762 S. State St., Salt Lake City, Utah.

▲ For more details circle NED-375 D3 on enclosed inquiry slip ▲

Try Them Free!
KEPS
TESTING SAMPLES

See how this amazing new Shakeproof fastening saves assembly time and assures vibration protection. A SHAKEPROOF® Lock Washer of the right size and type is pre-assembled on each nut . . . only one unit to handle . . . the lock washer can't drop off . . . every nut is certain to be locked tight.

SEND FOR YOUR FREE KIT OF KEPS TESTING SAMPLES TODAY!

SHAKEPROOF®
"Fastening Headquarters"
Division of Illinois Tool Works
St. Charles Road, Elgin, Illinois

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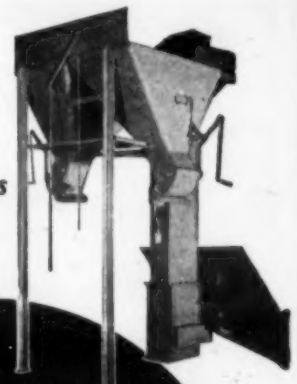
the
HANDY SANDY
gives you 7 advantages
THAT MEAN LOWER COST SAND HANDLING FOR YOU



fits any foundry

1. Puts the Sand Pile Overhead
2. Eliminates Shoveling and Waste Motions for the Molder
3. Increases Molders' Output
4. Savings From First Unit Pay for the Next Unit
5. Improves Condition of Sand
6. Takes Little Space
7. Low Cost — Simple to Install

write for bulletin No. 205

NEWAYGO ENGINEERING COMPANY
NEWAYGO, MICHIGAN

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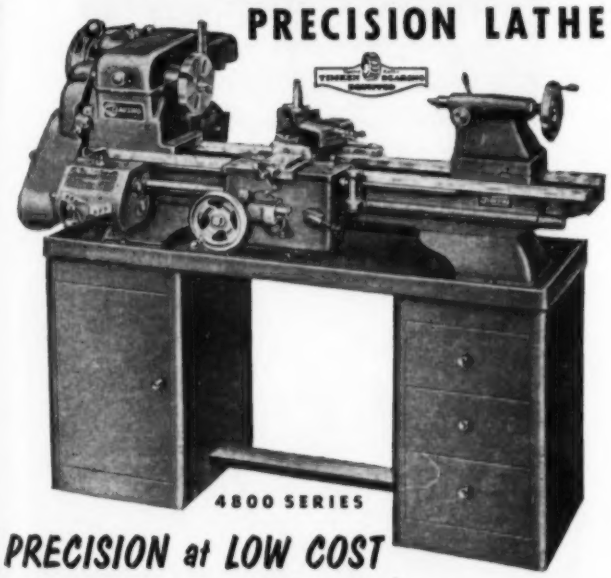
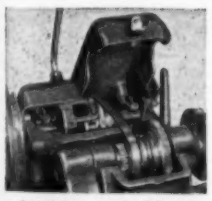
COUNTERSHAFT CLUTCH and BRAKE SAVE TIME and INCREASE PRODUCTION

CLAUSING
12" HEAVY-DUTY PRECISION LATHE

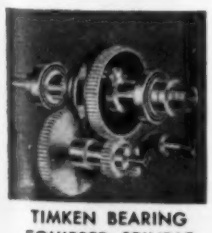


4800 SERIES

PRECISION at LOW COST FOR TOOL ROOM OR SHOP!



CLUTCH AND BRAKE EQUIPPED SPINDLE COUNTERSHAFT



TIMKEN BEARING EQUIPPED SPINDLE

HEAVY-DUTY PRECISION V-BED

This Clausing lathe has a built-in countershaft with friction clutch and brake that permit instant starts and stops of the headstock spindle without stopping the motor. You step up production, save many costly minutes every day with a Clausing heavy-duty precision lathe.

And this is but *one* of the many extra-value features you get with a Clausing. Others include Timken tapered roller bearings equipped spindle; wide heavy bed with Vee-ways and flat ways precision ground; automatic apron with splash lubrication; complete V-belt drive; massive construction — 36" between center lathe weighs 535 pounds.

Prices start at $420.00! The Clausing 4800 is truly the greatest 12-inch lathe value. For complete details, see your dealer or write for catalog for additional information.

Atlas CLAUSING

CLAUSING DIVISION
ATLAS PRESS COMPANY
4-113 N. PITCHER ST. • KALAMAZOO, MICH.

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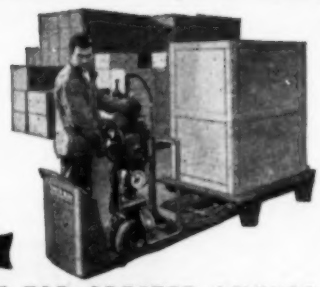
NOW truck-man



WITH POWER LIFT FOR GREATER SAVINGS

Successfully tested in the heaviest industries, two Truck-Man models are now ready to cut your costs still more with power lift. Hundreds of Truck-Man trucks with much smaller load capacities and only hand pumps are more than earning their way throughout the nation. Now Power Lift increases this efficiency while retaining the advantages of the agile standard models. A flick of the wrist and the new power lift raises or lowers the load instantly. Once load is raised from the floor, truck can start as balance of lift can be made in transit. 15-40 seconds are saved each trip—more trips per day—more work with less effort.

SIX VERSATILE MODELS

NEW MODEL DHP—Heavy Duty Skid Lift with power pump, 4500 lb. capacity—scoots through narrow aisles, up inclines and around sharp corners with a full load, three shifts a day with ease.

NEW MODEL DFP—3000 lb. capacity, power lift Pallet Toter—hustles those heavy palletized loads around the plant in jig time. Easily does the work of units costing 3 to 5 times as much.

MODEL DH—4500 lb. Skid Lift with Hand Pump.

MODEL DF—3000 lb. Pallet Toter with Hand Pump.

MODEL DT—2000 lb. Platform Utility for intra-plant messenger service, parcel delivery or other manually handled loads.

MODEL DR—Truc-Tor for towing those heavy cargo trains—up to 6500 lbs. on dry level concrete.

truck-man **DIV. OF THE KNICKERBOCKER CO.**
627 LIBERTY STREET • JACKSON, MICHIGAN

▲ For more details circle NED-376 D3 on enclosed inquiry slip ▲

Only the New **TYPE "R" MORRIS SLURRY PUMP** *has these 4 features*

1. Gland is under suction pressure only. This feature practically eliminates packing troubles.
2. For dismantling, you need remove only four bolts. No internal studs or bolts . . . no troublesome fits or joints.
3. You can remove impeller and liner without disturbing piping.
4. Shell interchangeable for right or left-hand rotation. Suction and discharge nozzles can be rotated to positions in any of four quadrants.

The New Type "R" Morris Slurry Pump handles caustic or acid mixtures containing abrasives or solids; also ore concentrates, tailings, slag, residue from filters and classifiers.

Write for specifications and operation data on pumps best suited to your particular needs. No charge or obligation.

MORRIS MACHINE WORKS
Baldwinsville, N. Y.
Sales Offices in Principal Cities

MORRIS **CENTRIFUGAL PUMPS**

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GARLAND RAWHIDE HAMMERS

Compare These Features With Any Other Hammer!

1 A constant tight fit of the rawhide face, without the use of glue or shellac. The first blow forces the pronged disc (A) into the back of the rawhide plug (B), expanding it to fit securely to the slightly larger inside diameter of the shell (C).

2 Removal of worn, rawhide faces is easy and quick. Simply insert a chisel or heavy screwdriver in slot, give it a tap, and out come the disc and worn plug.

Made of resilient water buffalo hide, the toughest rawhide known.
Free folder lists sizes, weights, prices of Garland rawhide hammers, replacement faces, and mallets.

GARLAND MFG. CO., Saco, Maine
Mfrs. of Rawhide Hammers, Mallets, Loom Pickers

For more details circle NED-380 D3 on enclosed inquiry slip

Compare this Toledo No. 999 gear-train with others in portable 2" pipe machines and you will appreciate Toledo's superiority! It's *your* money you are spending. Get Toledo value! Wheel or knife cut-off. High production, dependable...ask your distributor. The Toledo Pipe Threading Machine Co., Toledo, Ohio.

Built to last!

Heavy duty gear-train means "plenty of guts" in Toledo No. 999 2" Pipe Machine!

TOLEDO
PIPE TOOLS ... POWER PIPE MACHINES

For more details circle NED-381 D3 on enclosed inquiry slip

get the facts

32 informative pages on

LAMSON BILLMYRE BLOWERS & EXHAUSTERS

...a complete file of blower and exhauster information—Fundamental Engineering Laws for Blower Applications, Blower Engineering Tables, Blower Operating Features, application data, and lots more—all in one handy catalog.

LAMSON

We have a copy for you ... just clip this coupon to your signed letterhead and mail

LAMSON CORPORATION
204 Lamson Street, Syracuse 1, N. Y.
Gentlemen:
Without any obligation on my part, please send me my copy of the Lamson Billmyre Blower and Exhauster Catalog B-6.
Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State____ 8804

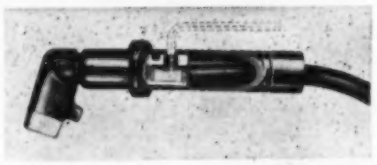
For more details circle NED-382 D3 on enclosed inquiry slip

MINIATURE BLOWERS useful for cooling applications

Available in 1½, 2, 2½ and 3-in. sizes, miniature blowers are especially suited for cooling airborne electronic equipment. Glass fiber reinforced plastic scroll directs flow of air supplied by the Sirocco type aluminum or cadmium plated blower wheel. Units withstand temperature changes in range of −55 to 125° C. They are supplied with miniature 400-cycle or variable frequency motors which are also designed to withstand severe temperature changes. Made by **Electroflow Pumps Inc.**, 4811 Anaheim-Telegraph Rd., Los Angeles 22, Calif.

For more details circle NED-383 D3 on enclosed inquiry slip

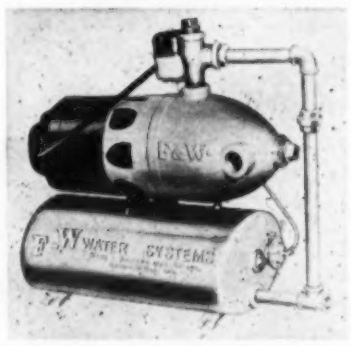
WELDING CABLE CONNECTOR combined with electrode holder



Use of this combination welding cable connector permits joining of cable to Shortstub electrode holder without solder. Large contact area between holder and cable and tight connection are made possible by use of ½-in. diameter fine-thread socket screw. Hole in fiber handle admits hex key wrench for tightening. Made by **Bernard Welding Equipment Co.**, Dept. D, 10222 Ave. N., Chicago 17, Ill.

For more details circle NED-384 D3 on enclosed inquiry slip

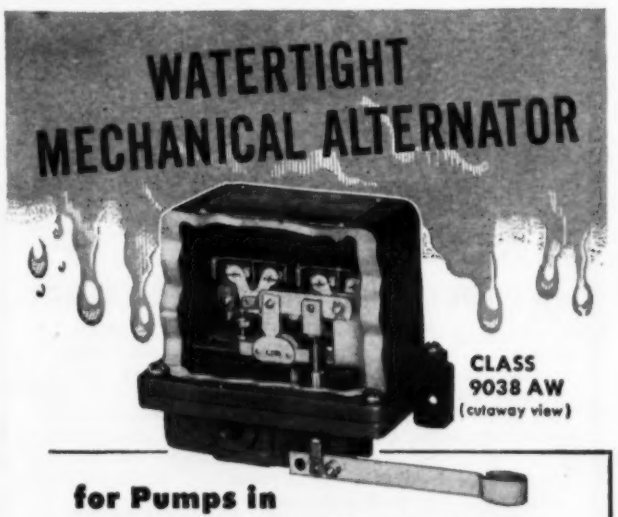
PACKAGED PUMP UNITS for shallow and deep well uses



Especially engineered for light duty use, Economy Package pump units operate on 110 v. Shipped completely assembled, they include pressure switch, foot valve, air controls, pump, motor, tank and fittings. Bullet pump for shallow well service has ⅓-hp motor and delivers 350 gph at 15 ft suction head and 20 psi discharge pressure. The snub nose pump for wells up to 60-ft deep has ⅓-hp motor and capacity of 370 gph at 30-ft lift and 19 psi operating pressure. Made by **Flint & Walling Mfg. Co.**, 909 N. Oak St., Kendallville, Ind.

For more details circle NED-385 D3 on enclosed inquiry slip

WATERTIGHT MECHANICAL ALTERNATOR



CLASS 9038 AW (cutaway view)

for Pumps in Moisture-Laden Atmosphere

• Available in lever operated type (*illustrated*) for sump or open tank installations ... also available in flange mounted types for condensate pumps. Provides equal wear of both pumps in duplex system. Brings both pumps into operation when peak capacity is required. ALSO AVAILABLE IN EXPLOSION-RESISTING ENCLOSURE.

Write for Bulletin 9038. Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin

SQUARE D COMPANY

For more details circle NED-386 D3 on enclosed inquiry slip

A TOOL BOX AT YOUR FINGERTIPS

INTERCHANGEABLE COUNTERBORE SETS

Continental Interchangeable Counterbore sets give you a wide variety of cutting tools in a compact, convenient form. Three sets are available, for the large or small toolroom. Each set features the famous Continental indestructible drive that will not stick, will not break, and is always hand detachable. Full details are given in Bulletin B 47-37. Send for your copy.

CONTINENTAL TOOL WORKS
Division of Ex-Cell-O Corporation
Detroit 32, Michigan

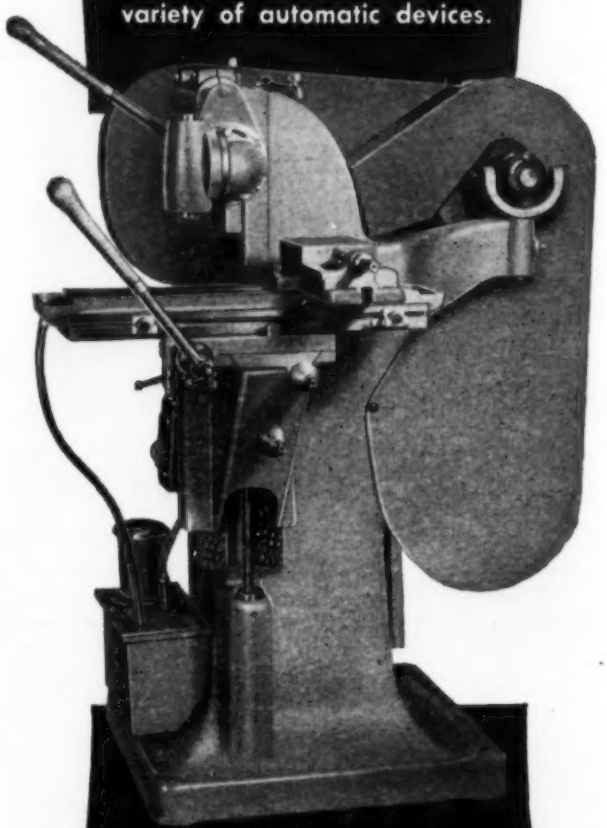
CTW

For more details circle NED-387 D3 on enclosed inquiry slip

Equally Economical and Efficient for one-of-a-kind or a million of the same milling operations

U. S. NO. 1

ALL-PURPOSE, HAND-FEED MILLING MACHINES are adaptable to specialized production jobs with a variety of automatic devices.



Our suggestions as to how a U. S. No. 1 Milling Machine can cut costs on your particular production needs, as well as complete data on the basic machine and attachments, gladly furnished on request.

United States MACHINE TOOL CO.
A Division of U. S.-BURKE MACHINE TOOL CO.
BROTHERTON ROAD 2, CINCINNATI 27, OHIO

For more details circle NED-388 D3 on enclosed inquiry slip

SPARE THE MUSCLES!
LET "George" HAUL TOTE BOXES

This cleverly designed, easy-rolling hand truck supplies the leverage that "goes to bat" for employee muscles. Attached rigid handle hook is engaged with tote box handle. With little effort and by natural leverage, the box glides over bevel edge of truck onto rollers when truck handle is pulled forward. Load is safely held on upper rollers while truck is rolled to destination on lower set of traction rollers.

No dangerous lifting of metal-laden boxes . . . long life . . . low cost. Most plants can use several . . . one company bought 150 units. Get yours!

*TRADEMARK

LET "George" DO IT
4RGS3

Send for Bulletin N
ROLOCK Inc. • Fairfield, Conn.

For more details circle NED-389 D3 on enclosed inquiry slip

3 WAY Flow "FLEX-A-SWITCH"

LEFT and RIGHT and THROUGH

ROLLERS are concentric at any setting to assure positive line of travel without guard rails. Can be used with curves and straight sections to distribute work in production or warehouse handling. Standard 11½"; 15"; 18" conveyor widths.

2 WAY Flow

• LEFT & THROUGH
• RIGHT & THROUGH

Remote or manual control. Remote control illustrated at left.
WRITE FOR DETAILS

METZGAR CO.
MFGRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES
416 Douglas, N. W.
GRAND RAPIDS 4, MICH.

For more details circle NED-390 D3 on enclosed inquiry slip

There is a difference
. . . IN CARBIDE TIPPED SAWS!

All carbide tipped saws are NOT alike. No sir . . . MEYCO circular saws are in a class by themselves because the blade and tooth design have been engineered SPECIFICALLY for carbide teeth.

The W. F. Meyers Company has been making precision tools since 1888 and their experience in the field of diamond tooth saws and carbide cutting tools is extensive. This engineering know-how is what has made MEYCO carbide tipped circular tools accepted throughout American industry.

Tungsten carbide's high resistance to abrasion makes it especially adaptable to cutting materials that rapidly wear out the best steel tools. Carbide produces smoother, finer cuts of wood and sails through plastics and other synthetic materials that offer a high resistance to cutting by steel.

And when the saw is properly engineered for tungsten carbide it will run longer between grinds, give you more regrinds—you have a work saving, money saving tool that will increase production many fold. Write for descriptive catalog and price list No. 19

W. F. MEYERS CO., INC., BEDFORD, INDIANA

For more details circle NED-391 D3 on enclosed inquiry slip

CENTRIFUGAL PUMPS
deliver 70 gpm at 110 ft head

Designed for general service, or as integral parts of air conditioning units, cooling towers, hot water circulators, etc., model B motor-driven centrifugal pumps will deliver up to 70 gpm at heads up to 110 ft. Units incorporate mechanical shaft seals, stainless steel shafts, enclosed bronze impellers and heavy duty ball bearings. Discharge orifice can be 1 or 1¼-in. diameter. Made by **Carver Pump Co.**, Muscatine, Iowa.

For more details circle NED-392 D3 on enclosed inquiry slip

COATED FABRIC WORK GLOVES
fingers have safety grip finish

Extending from middle of the palm to ends of the fingers of Redmont coated fabric work gloves is a safety grip finish which improves wet grip, affords long wear and will not chip, crack or peel. Finish is made of material which cures into and becomes part of the base Neox reinforced neoprene coating. Gloves are available in five styles ranging from fully coated knitwrist to an elbow-length gauntlet. Illustrated is the 12-in. gauntlet. Made by **Edmont Mfg. Co.**, 1240 Walnut St., Coshocton, O.

For more details circle NED-393 D3 on enclosed inquiry slip

ELECTRONIC TIMER
provides four types of timing

Interval, delayed action, automatic repeat and programming are four basic types of timing provided by the type 30HL1 automatic timer. Interval range is from 1/20-second to 4 minutes. All timing combinations are in the one unit and can be utilized by changing external connections to the terminal board. Basic electronic circuit is self-compensating for changes in line voltage. Power required is 115 or 230 v, 50-60 cycles. Made by **Photoswitch Inc.**, 77-89 Broadway, Cambridge 42, Mass.

For more details circle NED-394 D3 on enclosed inquiry slip

34,000 Pounds of Condensate

. . . must be removed every hour day and night from the steam coils in air driers processing salt at Manistee Salt Works, Manistee, Mich.

These Sarco float-thermostatic steam traps have been doing the job since 1948 without a break, at a steam pressure of 150 psi.

They can't air-bind because each trap is equipped with a standard Sarco thermostatic air vent. These vents operate on the balanced pressure principle and are unaffected by changing or fluctuating steam pressures.

Where very large volumes of condensate must be removed instantly, this trap has no equal. For additional information, write for Bulletin 450-10 to *Sarco Company, Inc., Empire State Bldg., New York 1, N. Y.* *Advt. 604*

For more details circle NED-395 D3 on enclosed inquiry slip

CUTS CORRUGATED STEEL SHEETS
"slick as a whistle"

Faster than a hand shear and non-tiring because you use the NIBBLEX in any power driven hand drill that takes a ¼" shank.

It's not a shear. It's a high precision punch and die that takes a bite of metal at each rotation of the hand drill. Hardened and tempered for use on any sheet metal or material up to 19 gauge. The NIBBLEX cuts clean, leaving no unfinished edges or burrs.
Perfect for cutting guards, special shapes, production, maintenance and sheet metal repair or replacement work in factory, repair shop or home.

For die work ask about the NORD DI-PRO-FILER

Get yours today on 10 DAY FREE TRIAL
Price is only $13.75 with regular punch and die.
$3.15 extra for corrugated punch.

Nord INTERNATIONAL CORP.
P. O. Box 44D, Denville, N. J.

For more details circle NED-396 D3 on enclosed inquiry slip

Save time...
ENGRAVE your own NAMEPLATES
DIALS • PANELS

Engravograph

The fastest, easiest method for engraving individual nameplates, dials and panels.

- Automatic depth regulator
- Engraves 15 sizes from One Master alphabet
- Equipped with self-centering device

Send for Catalog IM 26

NEW HERMES, Inc. 13-19 University Place, N.Y. 3
In Canada: 359 St. James St., Montreal
World's Largest Manufacturer of Portable Engraving Machines

For more details circle NED-397 D3 on enclosed inquiry slip

TOLEDO®
PARCEL POST SCALES

Model 3659—Full capacity parcel post and express scale. Computes for all zones.

Control Postage Costs!

Save time . . . stop excess postage costs . . . avoid ill-will of "postage due" . . . with the speed and dependable accuracy of Toledo Scales! Choice of 11 models for mailing and parcel post . . . each with automatic Toledo indication of correct postage. Write for bulletin 3047-B. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO
HEADQUARTERS FOR SCALES

▲ For more details circle **NED-398 D3** on enclosed inquiry slip ▲

HINGED PLATEGRIP
BELT FASTENER No. 500

For Heavy Conveyor Belts of changing length

These heavy-duty belt fasteners make a strong, flexible joint in conveyor belts, belts of any width and of from ⅜" to ½" thickness. They offer special advantages in mines, quarries or industrial set-ups where length of position of belt is frequently changed, because sections can be removed or added at will. Joints are opened for this purpose by simply pulling out the hinge pin.

Easily and quickly applied on the job or in the shop. Special design gives deep compression into belting and smooth, flush joint.

Write for Circular

ARMSTRONG BRAY & CO.
5364 Northwest Highway • CHICAGO 30, U.S.A.

▲ For more details circle **NED-399 D3** on enclosed inquiry slip ▲

Supreme in its field, this mobile monster moved from drawing board to proving ground in record breaking time. Once there, it proceeded to shatter performance records too . . . a real tribute to the superb engineering and production power of the Army Ordnance Corps and the Chrysler Corporation.

BAY STATE abrasive products, among others, were used to accomplish this feat. In particular, BAYFLEX reinforced disc-wheels were used by many Chrysler suppliers for grinding "miles" of tank-hull welds.

BAY STATE is proud to play its part in this modern miracle of stepped-up production. We salute the Patton 48 and the forward-moving program of Army Ordnance and Chrysler.

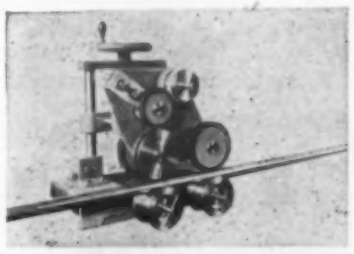
BAY STATE

BAY STATE ABRASIVE PRODUCTS CO., Westboro, Mass.
Branch Offices and Warehouses — Chicago, Cleveland, Detroit, Pittsburgh
Distributors — All Principal Cities
In Canada: Bay State Abrasive Products Co. (Canada) Ltd., Brantford, Ontario

ALL TYPES OF QUALITY PRODUCTS FOR GRINDING

▲ For more details circle **NED-400 D3** on enclosed inquiry slip ▲

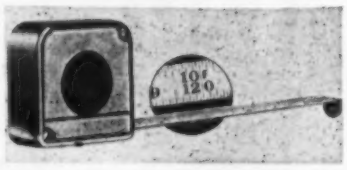
TUBE & BAR PRINTER
in models for up to 6-in. diameters



Codes, inspection data and trademarks are printed continuously on any length round, hexagon or square bar or tube by this bar printer. Models are available to accommodate stock from ½ to 6-in. diameter. Printing rolls automatically move at the speed of the stock however fast it is fed, and printing is uniform and legible. Roller bearing mounts assure smooth, effortless operation. Handwheel raises or lowers printing mechanism, and positioning rolls interchange rapidly to accommodate varying shapes. Unit uses permanent or soluble inks and natural or synthetic rubber type and logos. Made by **Jas. H. Matthews & Co.,** 3943 Forbes St., Pittsburgh 13, Pa.

▲ For more details circle **NED-401 D3** on enclosed inquiry slip ▲

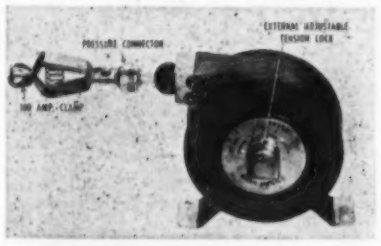
WELDERS' RULE
shows cumulative inches and feet



Cumulative inches as well as feet are indicated on the Chief 10-ft, spring recoil welders' rule. Tape is extra wide and finished in white with large easy-to-read markings in black. It has the strength to resist collapsing when extended either horizontally or vertically. Automatic brake holds extended tape at any point. Tip hook swings to the side for accurate inside measuring. Made by **Atlas Welding Accessories Co.,** 707 E. Lewiston St., Ferndale 20, Mich.

▲ For more details circle **NED-402 D3** on enclosed inquiry slip ▲

STATIC ELIMINATOR
combines clamp, wire and reel



A perfect ground for wide range of equipment which develops static is provided by this static discharge reel. Reel has externally adjustable tension lock which permits increasing or decreasing the tension of the wind-up spring. The reel is grounded through four electrical paths, and an additional ground in the form of a bridle can be provided. Pressure connector automatically releases when force is applied, thus preventing damage should the operator fail to release the cable. Unit is available with 40 and 80-ft cables. Made by **Ericson Mfg. Co.,** 5209 Euclid Bldg., Cleveland 3, O.

▲ For more details circle **NED-403 D3** on enclosed inquiry slip ▲

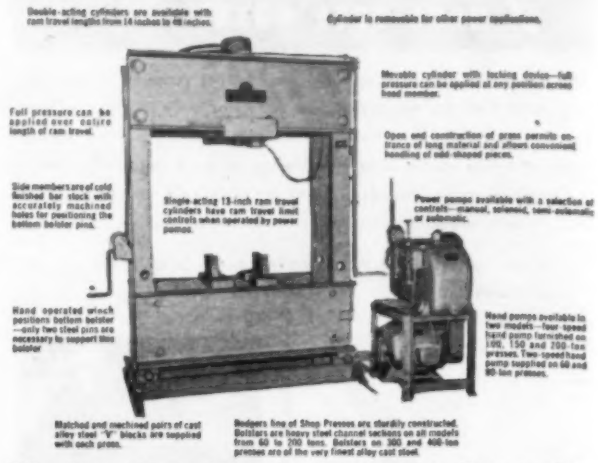
Get this Bulletin

With infinite variable speeds, The U. S. Varidrive Motor will boost your production, increase operator's efficiency and produce better quality work. 2 to 10,000 r.p.m. ¼ to 50 hp. Request new Bulletin.

U. S. ELECTRICAL MOTORS Inc.
Box 2058, Los Angeles 54, Calif. Milford, Conn.

▲ For more details circle **NED-404 D3** on enclosed inquiry slip ▲

No other shop presses
GIVE YOU ALL THESE PERFORMANCE FEATURES!



Although you can't see performance by looking at a press, you can see the features which make outstanding performance possible. That's why we illustrate here, a few of the many features incorporated in Rodgers Hydraulic Shop Presses. They are an exclusive combination of features that insure top performance, high efficiency and long, trouble-free service. Many other important features of Rodgers Shop Presses are shown in the new illustrated Catalog No. 313A. Write today for your free copy and then compare—point for point—feature for feature.

Rodgers Hydraulic, Inc.
7425 Walker St., St. Louis Park, Minneapolis 16, Minn.

▲ For more details circle **NED-405 D3** on enclosed inquiry slip ▲

THE BIG ONE

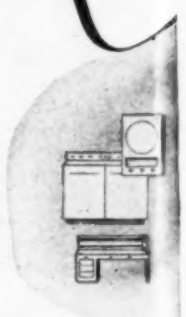
This Pilot Light Assembly was first made to accommodate the *S-11 lamp* and was intended for use in the cabs of great diesel locomotives.

or

THE LITTLE ONE

The miniaturization program on defense products required the development of this *sub-miniature* light. It is used on communication equipment and aircraft. Midget flanged base bulbs to fit are rated 1.3, 6, 12, and 28 volts.

Dialco HAS THE COMPLETE LINE of INDICATOR and PANEL LIGHTS



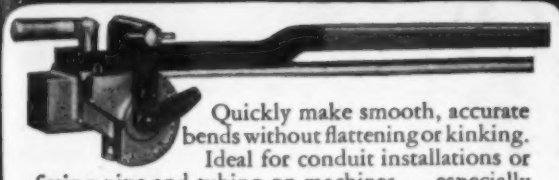
Samples to suit your own special conditions and requirements will be sent promptly and **without cost.** Just outline your needs. Let our engineering department assist in selecting the **right lamp** and the **best pilot light** for YOU.

Write for the Dialco HANDBOOK of PILOT LIGHTS

Foremost Manufacturer of Pilot Lights
DIALIGHT CORPORATION
60 STEWART AVENUE, BROOKLYN 37, N. Y. HYACINTH 7-7600

▲ For more details circle **NED-406 D3** on enclosed inquiry slip ▲

GREENLEE HAND BENDERS...for making small-radius bends in pipe, tubing, conduit.



Quickly make smooth, accurate bends without flattening or kinking. Ideal for conduit installations or fitting pipe and tubing on machines . . . especially designed to form neat bends for sharp corners and nooks. Various models and sizes for steel, copper, brass and aluminum tubing or pipe, rigid or thin-wall conduit.

Free Folder and Booklet on the Greenlee Bender line. Write Greenlee Tool Co., 1944 Herbert Avenue, Rockford, Illinois.

GREENLEE

▲ For more details circle **NED-407 D3** on enclosed inquiry slip ▲

HYSTER PRESENTS... Two Completely NEW Lift Trucks!

UC-30
Capacity, 3000 lbs.

YC-40
Capacity, 4000 lbs.

30" Free Lift
75" Turning Radius
38" Wide
82½" Collapsed Height (with 9' lift)
Cushion Tires

The Ultimate in 4000-lb. Lift Truck Maneuverability!

STREAMLINED AND FUNCTIONALLY DESIGNED FOR UNEQUALED PERFORMANCE IN CAR LOADING, WAREHOUSE AND ALL OTHER CLOSE-QUARTER OPERATIONS

Hyster now offers, in addition to the pneumatic-tired 4000-pound YT-40 Lift Truck, a *new* lift truck in the 3000-4000-pound class—*designed specifically for close-quarter operation!*

THERE'S PROFIT IN HYSTER POWER

Call your Hyster dealer for details, or write for Catalog 1241 to:

HYSTER COMPANY | 2906 N. E. Clackamas, Portland 8, Ore. 1012-06 Myers Street, Danville, Illinois

FOUR FACTORIES: Portland, Oregon; Danville, Illinois; Peoria, Illinois; Nijmegen, The Netherlands

▲ For more details circle **NED-408 D3** on enclosed inquiry slip ▲

NEW SKINNER SOLENOID VALVE

EXPLOSION PROOF TYPE X5

THE new Skinner X5 Solenoid Valve is basically the same as the widely accepted and tested V5, but modified to a construction that is Underwriters' approved for Class I, Group D hazardous locations. Small size and lightweight features are retained, and the X5 is low in price because of the many parts which are interchangeable with other Skinner valves. Rating is 10 watts max.; soft, spring loaded seals prevent leakage; internal parts are stainless steel; wide variety of port locations in ⅛" and ¼" size; most types available for metering; for AC or DC in a wide range of voltages and frequencies; can be mounted in any position; supplied as two-way normally open or closed, three-way normally open, closed or directional flow. *Write today for details!*

SKINNER ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
112 Edgewood Ave., New Britain, Conn.

▲ For more details circle **NED-409 D3** on enclosed inquiry slip ▲

TRUCK-MOUNTED COMPRESSOR for construction and maintenance

Designed around the recently introduced Fageol Van truck made by Twin Coach Co., this Air Van air compressor assembly is compact and efficient. Because of its integral construction, Van truck has large amount of payload space, and compressor occupies only one-quarter of this. Either 105 cfm or 160 cfm Auto-Air compressors are available, and they are driven directly from truck engine by a power take-off installed on truck driveshaft. Made by **Davey Compressor Co.**, Myers Ave., Kent, O.

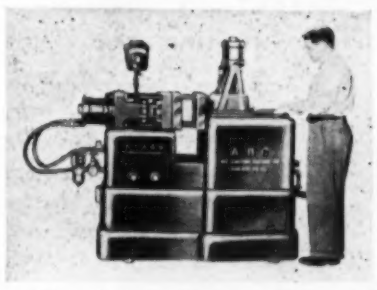
▲ For more details circle **NED-410 D3** on enclosed inquiry slip ▲

METAL COATING chemically pretreats and coats metal

Formulated for roller application on ferrous metals, Vinsynite FS-3 corrosion-resistant metal coating is intended for use under top coats, but will itself protect surfaces for short periods of time. It is yellow in color and, when baked as recommended, provides good adhesion and high resistance to exposure. It chemically pretreats metal and covers it with thin vinyl primer film in one operation. Types are available for dip, spray and brush coating of all metals, including aluminum, steel and copper, as well as glass and many plastics. Developed by **Thompson & Co.**, 1010 Allegheny Ave., Oakmont, Pa.

▲ For more details circle **NED-411 D3** on enclosed inquiry slip ▲

DIE CASTING MACHINE designed for short run production



Air-operated and capable of free-cycling speed in excess of 1000 shots per hour, model 1500 1½-lb zinc die casting machine is designed for producing small castings on short runs. It is easily set up and operated and has an electronic control panel, 10 x 10 x 2½ in. die blocks, four tie bars, and semiautomatic cycling with adjustable timing dwell on opening and closing of the toggle. Standard die thickness of two halves is 5 in. and maximum is 7 in. Die locking pressure is 20 tons, die opening is 4 in. and pot capacity is 275 lb of zinc. Made by **ABC Die Casting Machine Co.**, Dept. A, 339 W. 112th Pl., Chicago 28, Ill.

▲ For more details circle **NED-412 D3** on enclosed inquiry slip ▲

Shake-down HANDLING COSTS

. . . WITH SPO AIR VIBRATORS

Don't let bins become bottlenecks! Keep materials flowing and production moving with **SPO** air vibrators. These powerful low-cost units assure steady, jam-free flow of powdered or granular materials from bins, hoppers and chutes . . . prevent clogging and packing.

SPO vibrators feature a special corrosion-proof bronze alloy cylinder liner which assures full-power starting, high-speed operation, low air consumption and maximum service life.

Write today for Bulletin 50.

1008-SI

SPO INCORPORATED
6475 GRAND DIVISION AVE. • CLEVELAND 25, OHIO

▲ For more details circle **NED-413 D3** on enclosed inquiry slip ▲

use Hanna Valves for exacting CONTROL

HAND OPERATED

SOLENOID FOOT OPERATED "FLO-SET" PILOT VALVES

Hydraulic and pneumatic cylinder performance is dependent on the efficiency of the control valves used. That's why it pays to use Valves made by a leader in cylinder manufacture. For more than fifty years, the Hanna name has been synonymous with quality. With Hanna Valves, you have a selection to meet every cylinder operating need, plus the advantages of Hanna engineering services. Get your local Hanna Representative's name from your classified telephone directory or write for complete Valve data.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT — CYLINDERS — VALVES — RIVETERS
1759 ELSTON AVENUE • CHICAGO 22, ILLINOIS

▲ For more details circle **NED-414 D3** on enclosed inquiry slip ▲

120% INCREASE IN PRODUCTION With Less Manpower

D.P.S. Motorized HOPPER UNIT
PICKS 'EM UP & LAYS 'EM DOWN IN EXACTLY THE RIGHT POSITION

Let Us Adapt This Precision SELECTIVE FEEDING DEVICE To Your Individual Needs

Send us your feeding problem . . . Tell us where you want it . . . How fast you want it . . . and in what position you want it . . . AND WE WILL PUT IT THERE FOR YOU.

See how these hoppers are adaptable to all types of production machines.

WRITE FOR OUR MOST RECENT CATALOG

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICH.

▲ For more details circle **NED-415 D3** on enclosed inquiry slip ▲

WICKWIRE ROPE SLINGS

in braided and single part construction

Braided slings made by Wickwire give you these advantages:

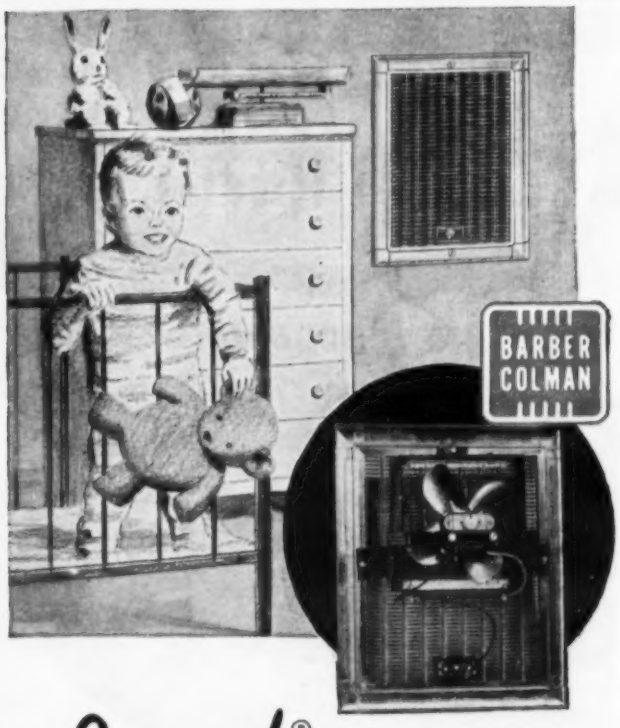
- Extreme flexibility
- Non-kinking properties
- Better conformation to irregular surfaces
- More even load distribution
- Will not take a permanent set

Write or call our nearest sales office for full details.

THE COLORADO FUEL AND IRON CORP.—Abilene (Tex.) • Denver Houston • Odessa (Tex.) • Phoenix • Salt Lake City • Tulsa
THE CALIFORNIA WIRE CLOTH CORP.—Los Angeles • Oakland Portland • San Francisco • Seattle • Spokane
WICKWIRE SPENCER STEEL DIVISION—Boston • Buffalo • Chattanooga Chicago • Detroit • Emlenton (Pa.) • Philadelphia • New York

WICKWIRE ROPE
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

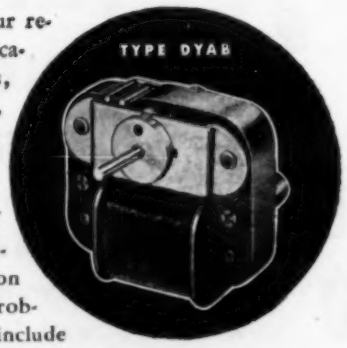
For more details circle NED-416 D3 on enclosed inquiry slip



Barcol® MOTORS POWER BROAN FAN-TYPE HEATERS

For dependable efficient operation Broan Manufacturing Co. Inc. selects the Barber-Colman motor to power their wall type electric heaters.

Barcol® continuous duty MOTORS



Are Engineered to your requirements. For applications such as fans, heaters, oil burners, toys, industrial instruments and other original equipment products take advantage of Barber-Colman engineering in the solution of your small motor problems. "Plus" features include generous oil reservoirs — porous bronze bearings — hardened and ground stainless steel shafts — low power consumption — high starting torque. The BARCOL MOTOR line includes unidirectional, synchronous, and reversible motors — with or without reduction gearing — up to 1/30 HP.

WRITE FOR COMPLETE CATALOG

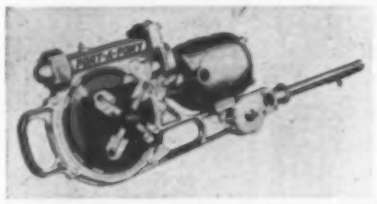
BARBER COLMAN

Barber-Colman Company
1206 ROCK STREET • ROCKFORD, ILLINOIS

For more details circle NED-417 D3 on enclosed inquiry slip

PORTABLE PIPE THREADER

26-lb unit threads 1/4 to 4-in. pipe

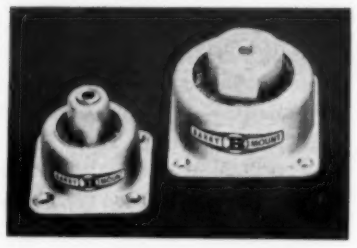


One man can easily carry and operate the 26-lb Port-A-Pony power pipe threader which attaches to pipe in same manner as hand operated threaders. Unit utilizes ring gear principle to turn dies and will thread 1/4 to 4-in. pipe. All popular types of hand die stocks are adaptable to threader and can be seated and locked in place in matter of seconds. Proper cutting speed is assured by 1/2-hp, 110-v ac or dc reversible electric motor which also removes unit from finished threads with flip of toggle switch. Working area required is only 12 in., allowing stationary pipes to be threaded in place. Made by **Thread-Ezy Mfg. Co.**, Dept. N, 324 Shiawassee St., Corunna, Mich.

For more details circle NED-418 D3 on enclosed inquiry slip

VIBRATION ISOLATORS

damping unchanged by continued use

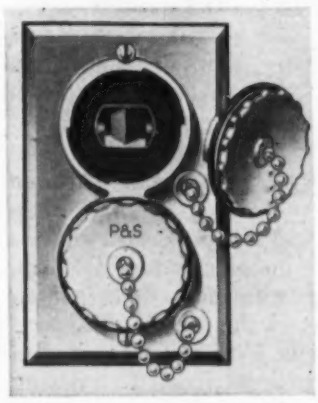


Efficiency of All-Metl type 7630 and 7640 vibration isolators is unchanged by continued service. With JAN cup size 1 and 2, respectively, the Barrymounts are designed so that load-bearing spring returns the damper to its normal position on every cycle, thus preventing damper packing. Other features are light weight, hex top and wide temperature tolerance. Made by **Barry Corp.**, 852 Pleasant St., Watertown 72, Mass.

For more details circle NED-419 D3 on enclosed inquiry slip

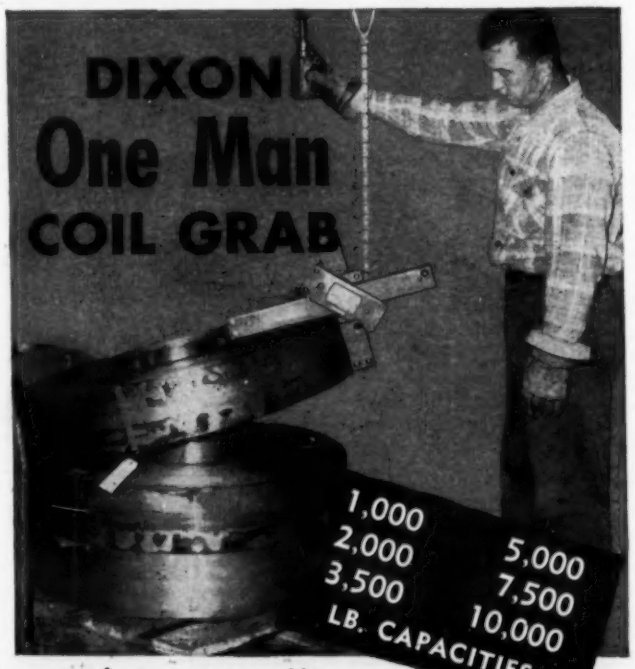
WEATHERPROOF OUTLET

features positive latching cap



Serrations in positive latching type cap of this No. 4527 weatherproof duplex outlet affords firm grip for removal or replacement. Cap will not loosen of its own accord. Outlet is 13202 Despard type which meets Federal specifications. Cap and plate are cast aluminum alloy which is treated to withstand weather. Plate gaskets seal outlet against elements. Made by **Pass & Seymour, Inc.**, 50 Boyd Ave., Syracuse 9, N. Y.

For more details circle NED-420 D3 on enclosed inquiry slip



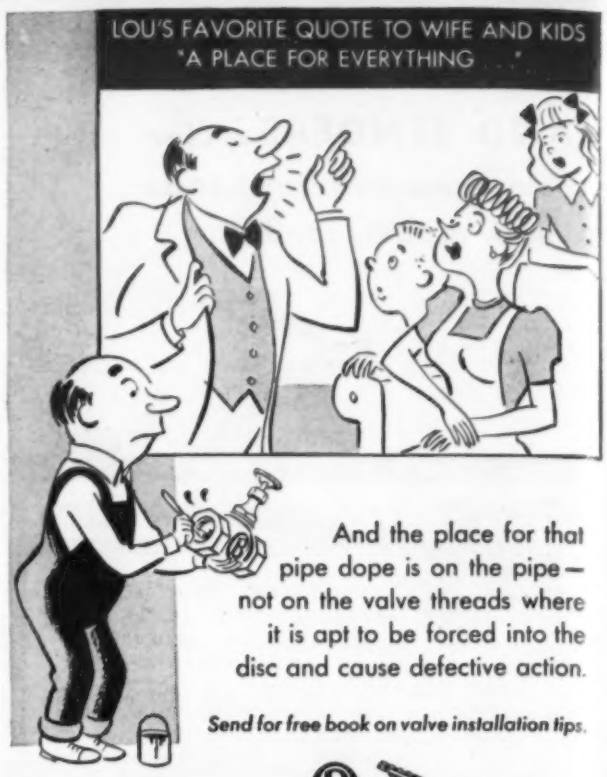
Automatically ADJUSTS TO COIL SIZE

Seven standard models available to handle coils from 1" to 48" wide.

Export Dept.: 306 W. Washington Bl., Chicago 6, Ill.

DIXON *Automatic Tool, Inc.*
2310 23rd Ave. • ROCKFORD, ILLINOIS

For more details circle NED-421 D3 on enclosed inquiry slip



And the place for that pipe dope is on the pipe — not on the valve threads where it is apt to be forced into the disc and cause defective action.

Send for free book on valve installation tips.

Ohio Brass VALVES
MANSFIELD . . . . . OHIO

For more details circle NED-422 D3 on enclosed inquiry slip

Tough Babies!

THEY DEFY ROUGH HANDLING!

LOWER COST Material Handling favors these rugged items! Mill-box above features steel compound Top rail (see inset) and Bulge corners, both extraordinary wear-resisting. Note slat reinforcing and non-jamming "nesting limits"

BOTH BUILT BY "BAL" BUILT WITH A CONSCIENCE FOR MATERIAL HANDLING

Nesting tote boxes at right, also built with handles and strongly reinforced all-fibre; hard, vulcanized for severe usage.

ALSO HARD VULCANIZED FIBRE TRUCKS, DRUMS, SPECIAL CASES.

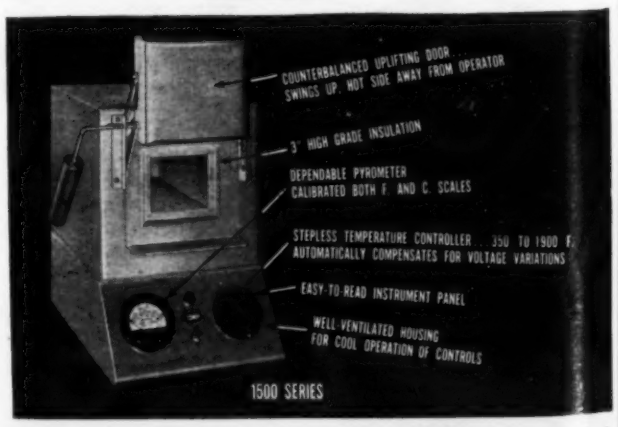
• *Write for Catalog!*

WILLIAM BAL CORPORATION
11 Johnson St, Newark 5, N. J.

For more details circle NED-423 D3 on enclosed inquiry slip

FOR PRECISE RESULTS

. . . TEMCO Electric Furnaces in 8 sizes to fit your specific job requirements



Wherever you need a bench-type electric furnace—for ashing, ignitions, fusions, lab work . . . or out on the line for full-scale production—there's a specific TEMCO model to do it accurately, efficiently! Eight convenient sizes, including 1500 Series above, with chamber sizes from 4" x 4¾" x 3¾" to 9½" x 8½" x 18". High-quality construction, expertly engineered, simple to install and operate . . . manual or electronic controls. $55 to $507.50. Write for literature and name of nearest dealer.

TEMCO® ELECTRIC FURNACES

THERMO ELECTRIC MFG. CO., 484 HUFF ST., DUBUQUE, IOWA

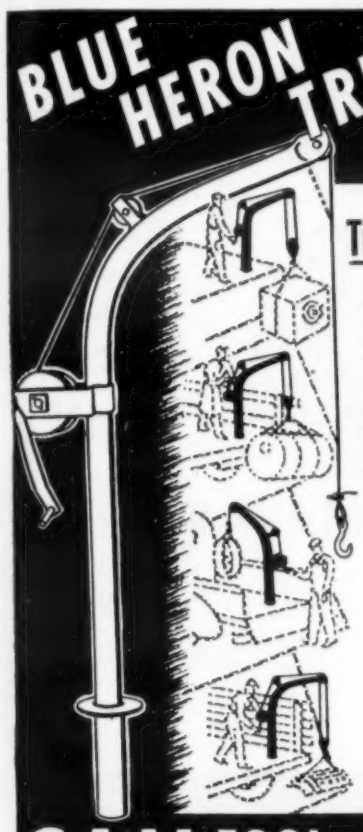
For more details circle NED-424 D3 on enclosed inquiry slip

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works, 22 Hancock St., Quincy, Mass.** *Advt.*

▲ For more details circle **NED-425 D3** on enclosed inquiry slip ▲

BLUE HERON TRUCK CRANE SAVES



Time Money Labor

ONE MAN can handle up to ONE TON —EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

Equip ALL company trucks with sockets. Then change cranes from truck to truck.

CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

▲ For more details circle **NED-426 D3** on enclosed inquiry slip ▲

SKYWORKER FOR PLANT MAINTENANCE

SOLVE OVERHEAD PROBLEMS QUICKLY, EASILY AND SAFELY with the SCHRAMM Pneumatractor equipped with SKYWORKER

A combination of height and reach, speed of operation, supply of air, 105 cfm, and efficiency, cut overhead on building and shop maintenance.

Write for Bulletin SK1-53

SCHRAMM, INC. The Compressor People WEST CHESTER, PA.

▲ For more details circle **NED-427 D3** on enclosed inquiry slip ▲

DEHUMIDIFIER
requires only electric connection

The Moisture Magnet, a self-contained heavy duty electric humidifier, requires no installation other than connection to an electric outlet. It automatically removes excess water or moisture from the air of enclosed spaces. For drainage the unit can be placed over an existing floor drain or pails can be used for water collection. It can also be attached to a drainage system. Dehumidifier is available in two capacities and is recommended for operation at room temperatures of 60 to 110° F and relative humidities of 40 to 100 per cent. Made by **Remington Corp.,** Air Conditioning Div., 71 Willey St., Auburn, N. Y.

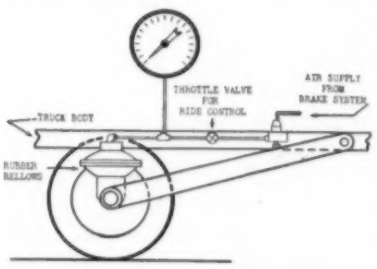
▲ For more details circle **NED-428 D3** on enclosed inquiry slip ▲

IMPORTANT

If you have not returned one of our regular questionnaires or sent us an inquiry during the past year, will you please fill in the coupon at the bottom of the inquiry slip in this issue and return it to us? No postage is required. The Controlled Circulation Audit, to which we belong, requires that we verify each name on our mailing list regularly. Therefore, if you want to continue receiving NEW EQUIPMENT DIGEST each month, you must send us an inquiry slip or return the circulation questionnaire which is sent to you.

TRUCK LOAD WEIGHER
also affords safe, stable ride

Reported to cost less than conventional springs, this nu-Ride Weighmaster system of truck mounting also provides for weighing of load carried on truck. Vehicle is maintained level, regardless of loading, and also remains at proper height whether loaded or unloaded. Increase of air pressure in bellows type air cushion compensates for uneven loading and affords "pneumatic ride" under all travel conditions. System operates from truck airline pressure of 20 to 50 psi to support loads up to 9000 lb. Weight determination is made by using simple pressure gage. Developed by **Weber Instrument Co.,** 13841 Elmira Ave., Detroit 27, Mich.

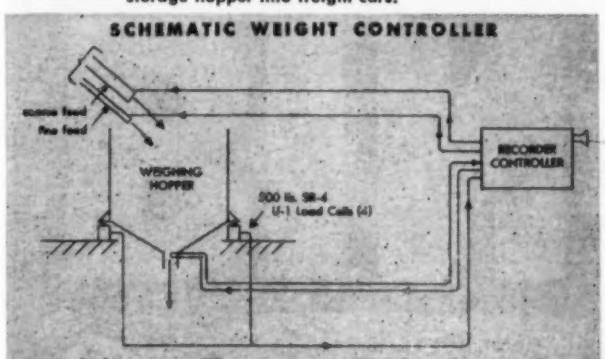


▲ For more details circle **NED-429 D3** on enclosed inquiry slip ▲

SR-4[R] Devices in Industry — Uses Unlimited

Problem: How to weigh automatically an expensive plastic from storage hopper into freight cars.

SCHEMATIC WEIGHT CONTROLLER



Block diagram—SR-4 Automatic Weighing System. Outputs of four 500 pound U-1 SR-4 Load Cells are totalized into strip chart recorder-controller which furnishes a complete record of each weighing cycle including final and initial weights.

Solution: A leading chemical company does it rapidly and accurately with a fully automatic SR-4 Weighing System.

This SR-4 System is giving all of these advantages:
- System will pay for itself quickly due to its very high accuracy in weighing large daily shipments of such an expensive material.
- Speed of operation (less than two minutes per 1000 lb. cycle) cuts costs.
  - Only one operator needed . . . just part time.
  - Automatically furnishes complete record of each weighing.
  - Rugged construction minimizes maintenance.

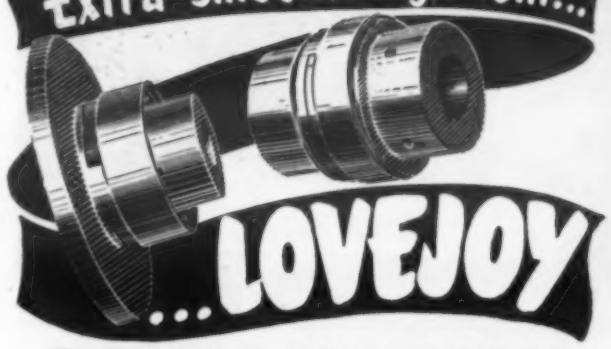
For latest technical information please write to Baldwin-Lima-Hamilton Corp., Dept. 3029, Philadelphia 42, Penna.

TESTING HEADQUARTERS

BALDWIN-LIMA-HAMILTON Philadelphia 42, Pa.

▲ For more details circle **NED-430 D3** on enclosed inquiry slip ▲

Extra-Smooth Alignment...



...LOVEJOY

FLEXIBLE COUPLINGS

Soundly engineered, LOVEJOY Flexible Couplings provide maximum alignment correction for smooth power transmission. Vibration, starting torque and shock of intermittent loads are dampened and absorbed. Operational efficiency and economy is increased, motor and machine protected—their service life lengthened. The end result is not only a more profitable, but an improved finished product.

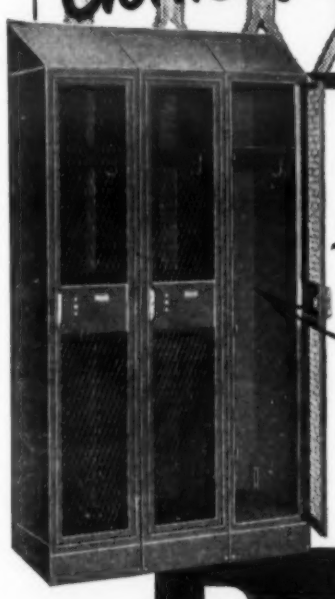
There is a LOVEJOY Flexible Coupling for every requirement. Cushions are made of materials best suited to the load conditions.

Write today for Catalog and Handy Selector Charts

LOVEJOY FLEXIBLE COUPLING CO.
5003 W. LAKE STREET CHICAGO 44, ILLINOIS
Also Mfrs. of Lovejoy Universal Joints and Variable Speed Transmissions

▲ For more details circle **NED-431 D3** on enclosed inquiry slip ▲

Keeps Clothes Fresher! penco



"AIR-LITE" LOCKER

The steel locker that "breathes" through ¾" mesh door openings—an exclusive Penco feature!

- MAXIMUM NATURAL VENTILATION
- DAMP CLOTHES DRY FASTER
- CONTENTS CAN BE INSPECTED—WITHOUT OPENING DOOR
- SAFE, PILFER-PROOF STORAGE
- PENCO QUALITY CONSTRUCTION
- SINGLE AND DOUBLE TIER TYPES —IN A WIDE RANGE OF SIZES

Send for complete locker catalog

85TH YEAR OF SERVICE

PENN METAL Corporation of Penna.
82 OREGON AVE., PHILA. 48, PA.

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15¢ per sq. ft. for New Floors
In 24 hours—No production delays

Hard Mastic Dustproof PERMAFLEX Waterproof Sliproof

AMAZING TRIAL OFFER!

Write now for free test. Try 100 Sq. Feet at our expense and be convinced!

"PERMAFLEX" Bonds perfectly—never comes loose—any thickness over old or new Floors, Walks or Drives — outwears any other known flooring.

Interior or exterior use—Floors installed on Friday night and Saturday can be in use Monday—No chipping — No dust — No production delays — No need to move machinery—finish right up to it.

A few of the more than 500 users of PERMAFLEX
U. S. Steel
General Motors
Chrysler
Remington Arms
General Electric
Westinghouse
Western Electric
Beechnut Packing

Never a failure in more than 1000 installations.

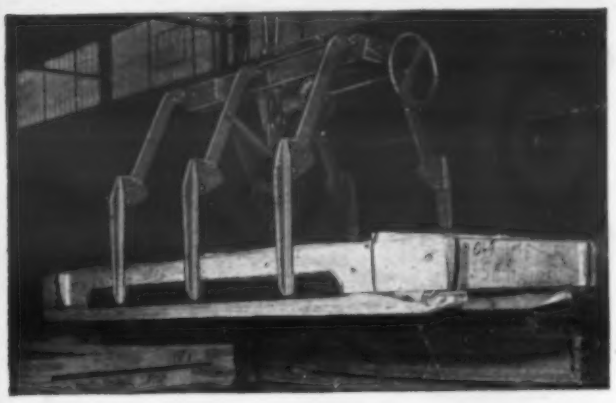
OUR CONTRACT DEPARTMENT CAN INSTALL "PERMAFLEX" FLOORS FOR YOU UP TO 30,000 SQ. FT. PER DAY.

Resurface Concrete | Patch Concrete to a Feather Edge | Resurface Wood | "Permaflex" will not rut under 3000 lbs. per sq. in.

Sales and Service at: Albany, N. Y.—3-1365; Atlanta—Main 4110; Baltimore—Belmont 3770; Chicago—Blue Isl. 4666; Detroit—Tuxedo 5-5500; New York—Wis. 7-5474; Norfolk—2-9035; St. Louis—Lucas 3700; San Francisco—Gar. 1-3196

PERMAFLEX PRODUCTS COMPANY
1834 North Front Street Phila. 22, Pa.

▲ For more details circle **NED-433 D3** on enclosed inquiry slip ▲



HERE'S SHEET HANDLING ECONOMY

No better demonstration of the efficiency, flexibility and economy of C-F Lifters can be made than to watch this 5 ton C-F Lifter handle all sheet steel movement in this busy Chicago district warehouse.

C-F Lifters have quick opening jaws with infinite opening and closing adjustments, permitting them to handle a wide variety of sheet widths—wide bearing angles that safely lift sheets without crimping edges—end control to permit close quarter operation—positive jaw controlling mechanism that holds the jaws open in any position—these and many other exclusive features make C-F Lifters a good investment in materials handling equipment.

C-F Lifters are made in manual and motor operated models in sizes to handle from 2 to 60 tons in standard and semi-special designs.

Write for the Bulletin "C-F Lifters"—it describes the advantages and economies C-F Lifters can bring to your sheet handling jobs.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

For more details circle NED-434 D3 on enclosed inquiry slip

DON'T get your neck in a NOOSE!

Use Milford's scientific approach to your fastening problem.

If you were solely responsible for recommending a machine tool for your company's production needs, you'd make pretty certain that your choice would perform correctly, efficiently, with the lowest possible dollar expenditure. Right?

It's important, too, to do likewise in recommending fasteners, and functional components that may be cold-headed. Millions of dollars yearly are wasted by not giving these parts . . . at the design stage . . . the same careful scrutiny that is given major production equipment.

Why not consult our cold heading engineers before designs are "frozen" . . . while planning is fluid enough to save you excessive costs?

EST. 1919
MILFORD
the name to rivet in your memory for fasteners

THE MILFORD RIVET & MACHINE CO.
929 Bridgeport Ave., Milford, Conn.
878 Illinois Ave., Aurora, Ill.
1158 W. River St., Elyria, Ohio
78 Platt Street, Hatboro, Penn.
753 So. Palm Ave., Alhambra, Calif.

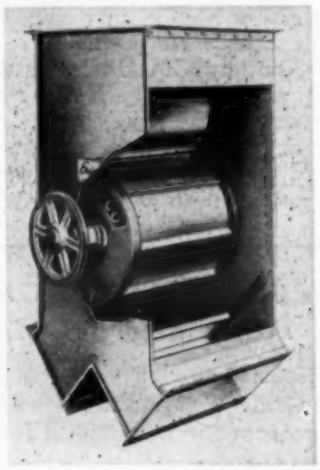
For more details circle NED-435 D3 on enclosed inquiry slip

TEMPERATURE DETECTOR for high frequency induction heating

Direct temperatures, in range above 800° F, of visible work heated by most high frequency induction machines can be measured with the Rayotube. Mounted 4 in. from induction coil, it can be focused on opening as small as 0.1-in. between turns of the coil to sight the hot surface of work. Instrument indicates 99 per cent of true temperature within 0.6-seconds. If temperature of work is changing, reading lags only 0.15-second. Housing withstands ambient temperatures up to 350° F, and optical system is hermetically sealed against dirt, dust and fumes. When combined with Speedomax recorder or controller, detector provides full control of induction heating directly from work temperature. Made by **Leeds & Northrup Co.**, 4934 Stenton Ave., Philadelphia 44, Pa.

For more details circle NED-436 D3 on enclosed inquiry slip

MAGNETIC DRUMS in 12 and 18-in. improved models available with or without housing



Improvements incorporated in Eriez magnetic drums include changeable sheave sizes; stainless shells that resist pitting and corrosion; dust-tight construction; rigid, cast aluminum sides; adjustable feeder assemblies; oil-sealed bearings; and extended discharge ducts. Drum removes tramp iron and fine ferrous contamination from materials conveyed in spouts, chutes and other systems not employing belts. It consists of revolving cylindrical shell within which stationary high-powered Alnico V permanent magnet is located.

Model DF-101 is feeding device as well as magnetic separator with material being fed against direction of rotation. This utilizes full effect of the magnetic field and eliminates glancing and back leakage of material. Model DF-102 is usually installed at discharge end of chute. Material feeds directly to smooth-faced shell, and back leakage is eliminated by back plate on the hopper. The 12-in. model has ⅓-hp and the 18-in. unit has ½-hp United States Syncro-gear 68-rpm, three-phase, 60-cycle, 220-440 v motor which mounts on either side of unit. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie, Pa.

For more details circle NED-437 D3 on enclosed inquiry slip

2744 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-438 D3 on enclosed inquiry slip

ENAMELSTRIP

STEEL • ALUMINUM • BRASS • PRE-FINISHED COLOR COIL

assures a perfect finish

before fabricating

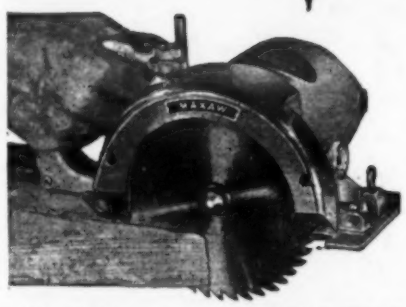
You can easily cut production time and cost with Enamelstrip, the continuous-feed, pre-colored metal coil. Leading manufacturers of metal products are using it with outstanding results in a wide variety of items. Enamelstrip's exclusive, flexible finish withstands the stresses of drawing, bending and forming without cracking or peeling. Many companies have entirely eliminated their finishing departments! Any metal in any finish will be coated and slit to your own specifications.

Write TODAY for detailed color bulletin.

THE COATED COIL CORPORATION
507 West 30th Street, New York 1 • LOngacre 5-3161

For more details circle NED-439 D3 on enclosed inquiry slip

MAXAW 700
magic • pivot does it!



$ for $ and lb. for lb.
CUTS DEEPER AT 45°

All Ball and Roller Bearing

MAXAW $69.50

Now you get a heavy-duty industrial saw that weighs only 10 lbs. and cuts 1⅞" at 45° . . . something no other industrial saw with a blade under 7¼" and costing under $115.00 will do. *magic • pivot* does it! Yes, the simple but long-overlooked *magic • pivot* engineering achievement puts the pivot point closer to the saw shaft, brings you performance found only in *magic • pivot* MAXAWS. Hard-biting "Stub-radius" blades stand 3 to 4 more sharpenings . . . last twice as long. The MAXAW does the work . . . faster work . . . and costs less.

Free Pamphlet— Find out what magic • pivot can do for you. Send for Pamphlet N-45.

Cummins-Chicago Corp.
DIVISIONS:
Cummins INDUSTRIALS • Cummins Portable Tools
4740 N. Ravenswood Ave. • Chicago 40, Illinois
IN CANADA: 334 Lauder Ave., Toronto

For more details circle NED-440 D3 on enclosed inquiry slip

FOSTER PRECISION HEIGHT GAGES 8" to 48"

Delivery from stock

- EXTREMELY ACCURATE
- WELL BALANCED
- HEAVY BASE AND BEAM
- GREATER STABILITY
- CLEAR-CUT 1/1000" GRADUATIONS
- HARDENED CHROME OR STAINLESS STEEL
- IN BEAUTIFUL WOODEN CASE

also FOSTER 6" to 48" Precision Vernier CALIPERS

WRITE **FOSTER SUPPLIES CO.**
5252 N. BROADWAY CHICAGO 40, ILL.

For more details circle NED-441 D3 on enclosed inquiry slip

ONE CONTROL DOES THE JOB OF TWO

DA-400

Available with Explosion-Proof or Weatherproof Housing

Mercoid DA-400 Series Pressure Controls incorporate a single bourdon tube which actuates two independently adjustable Mercoid magnet operated mercury switches to accomplish various circuit operations. For example:

1. Close one alarm circuit at high pressure and another at low pressure with both circuits open over operating range.
2. As an electrical interlock to open one circuit as pressure rises above and the second circuit as the pressure drops below operating range.
3. To provide two-stage control by opening or closing one circuit on a rise in pressure and the second circuit on a further rise in pressure.

Equipped with calibrated dial and outside adjustments—Ranges 0-30 psi to 300-2500 psi—The Mercoid magnet operated mercury switches are not affected by harmful effects of dust, dirt, or corrosion—your assurance of millions of operations.

Write for Bulletin 5P

THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILLINOIS, U.S.A.

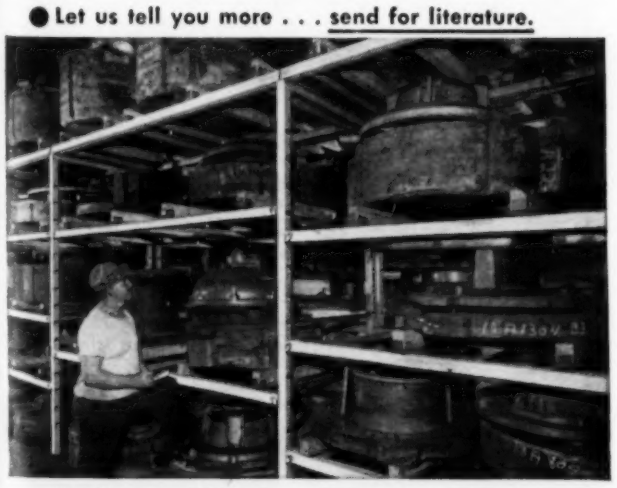
For more details circle NED-442 D3 on enclosed inquiry slip

The ONE and ONLY adjust-o-matic RACK

AMERICAN
RATCHET RACK
adjustable without bolting

..and the rack-shelf is in position

- No waste space . . . more storage space per sq. ft.
- Built for any size pallet skid or box.
- Let us tell you more . . . send for literature.



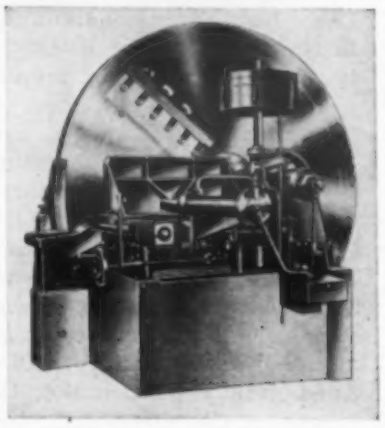
Installation at Westinghouse Electric Corp., Trafford, Pa.

AMERICAN METAL PRODUCTS CO.

STORAGE RACK DIVISION
5959 Linsdale • Detroit 4, Michigan

For more details circle NED-443 D3 on enclosed inquiry slip

LOG SLICING MACHINE
rate is 120 boards per minute



Logs measuring 20 x 24 x 48 in. are sliced into boards from $\frac{1}{32}$ to $\frac{5}{8}$-in. thick at rate of 120 boards per minute by this rotary slicing machine. Large rotary disk cutter has two knives set into machined-in recesses. Logs are placed unclamped on work table and are pushed against disk by oil-hydraulic feed mechanism. They can be round, square, whole, halved or quarter sawed, and can be sliced several at one time, one above the other or side by side. Slices are ejected at rear of the machine. Cutting process is started by moving single lever and continues automatically until stopped for reloading. Maximum cutting length is 16 in. on type 45/180 slicer, 33 in. on the 86/265 and 52 in. on the 134/370 machine. Made by **Plycor Co.,** 567 W. Washington Blvd., Chicago, Ill.

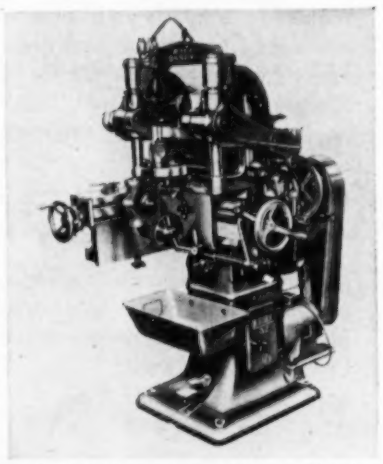
For more details circle NED-444 D3 on enclosed inquiry slip

MOTOR-OPERATED FIELD RHEOSTAT
utilizes snap-action limit switches

Snap-action limit switches are used in type RK motor-operated field rheostat, used to adjust speed of direct current motors up to 200 hp and voltage of generators up to 300 kw. Two cam-operated switches are supplied with each unit. Each cam adjusts over 360-degree range from front of rheostat, and is available for 15, 45 and 90 degree travel. Two gear ratios allow rheostat travel in ranges of 5 to 15 seconds and 15 to 45 seconds. Travel time can be adjusted over 3-to-1 range by inserting resistance in motor circuit. Units are easy to install, and all components are accessible. Made by **Westinghouse Electric Corp.,** P.O. Box 2099, Pittsburgh 30, Pa.

For more details circle NED-445 D3 on enclosed inquiry slip

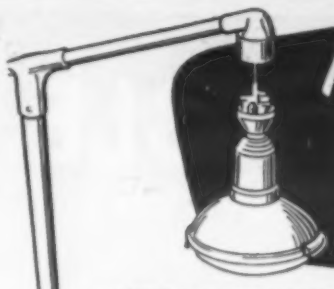
PUNCH SHAPING MACHINE
machines blanking punch or profiled part directly from solid stock



Function of this Essex 32A punch shaper is to machine a blanking punch, hob or profiled part directly from the solid in a single operation. Machine sets up simply, is highly accurate and produces a micro-finish. An ordinary shaping tool is used. Stroke is like that of a conventional shaper set vertically, and is adjustable from $1\frac{1}{2}$ to $4\frac{1}{2}$ in. Upon completion of predetermined straight stroke, rocker arm operates in swivel motion, finishing the desired radius.

The prescribed shape can be laid out, or a template soldered on the solid block of tool steel. Punch can be made oversized, then sheared into die to depth of about 1/32-in. Rest of punch is then finished off, guided by microscope, to exact contour of sheared-in section accurate within plus or minus 0.0005-in. Feature of machine is table shaping attachment used for swiveling dividing head from 0 to 15 degrees toward the tool and 5 degrees to right and left, so relief can be put on punches or draft on hobs. Made by **British Industries Corp.,** International Machinery Div., Dept. NED, 164 Duane St., New York 13, N. Y.

For more details circle NED-446 D3 on enclosed inquiry slip



NEW YARD LIGHT PACKAGE

LOWERS LUMINAIRE...COSTS...HAZARDS

Pole-mounted yard lights now can be serviced quickly, safely and with minimum cost by means of the **THOMPSON Pole-Top Unit.** Designed for use with new standard 20, 25 or 30-foot metal poles*, this assembly incorporates a disconnecting and lowering mechanism that permits low-cost ground-level luminaire servicing. There are no climbing or electrical hazards because the maintenance man works on the ground with a "dead" fixture (live contacts remain at pole top).

POLE-TOP UNITS are available in single and double-arm models with mast-arms ranging from 2 to 12 feet, in 2-foot increments. Luminaires are not included.

* Poles over 30 feet high can be supplied on order.

WRITE FOR BULLETIN "WPH" FOR COMPLETE DETAILS

1041-TE

THE THOMPSON ELECTRIC CO.
1138 POWER AVENUE • CLEVELAND 14, OHIO

For more details circle NED-447 D3 on enclosed inquiry slip

protect that air supply

ON AIR-CLAMPING DEVICES — AIR LINES, HOLDING CIRCUITS — PURGING SYSTEMS, etc.

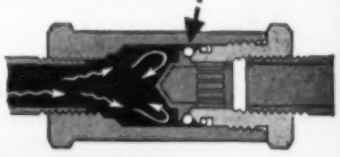
for safety's sake

With leakproof CIRCLE SEAL PRECISION

CHECK VALVES

Positive, dead-tight sealing assurance never before offered *plus* unprecedented, maintenance-free service life is provided by the CIRCLE SEAL principle.

The ultimate answer to check valve requirements from very low pressure to 3,000 psi.



JAMES-POND-CLARK
2181 E. Foothill Blvd. • Pasadena 8, Calif.

Engineering data sent free of charge on request.

For more details circle NED-448 D3 on enclosed inquiry slip

You get ALL these features when you buy PET DRILLS!

If you want the best, take an extra look at the PET Superduty Drill above! Here's a continuous-duty drill—built to *work* right and *handle* right.

And, the price is right, too! All features shown are *standard* in PET Superduty Drills—at a *standard drill price!* Complete line of 54 ¼", ⅜" and ½" models gives you wide selection—in pistol or saw-type grip. Use coupon below to get complete facts!

PORTABLE ELECTRIC TOOLS, INC., 320 W. 83rd St., Dept. ND-43, Chicago
In Canada: Portable Electric Tools, Ltd., 452 Birchmount Rd., Toronto

MAIL COUPON FOR FREE BULLETIN

Please send me free PET Superduty Catalog and name of nearest distributor.

Name_____ Title_____
Company_____
Address_____
City_____ State_____

For more details circle NED-449 D3 on enclosed inquiry slip

UNITABLE®
BELT CONVEYOR

For Assembly - Inspection - Packaging

The most ADAPTABLE portable conveyor you can find. Exclusive "unitized" design 10' to 80' lengths. Write for UNITABLE Bulletin now.

CONVEYOR SPECIALTY COMPANY INC.
37 Newport Avenue
North Quincy 71, Mass.

▲ For more details circle NED-450 D3 on enclosed inquiry slip ▲

ROPER *Rotary Pumps*

NEW!

LATEST EDITION OF THIS HELPFUL BOOKLET NOW READY FOR YOU!

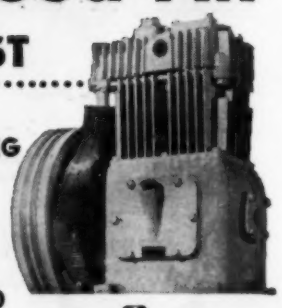
Here is a valuable guide covering important fundamentals of the average pumping job. It includes tables, charts, sample problems, and other pertinent data. You'll want this new edition in your files.

SEND FOR FREE COPY TODAY!

GEO. D. ROPER CORPORATION
664 BLACKHAWK PARK AVENUE, ROCKFORD, ILLINOIS

▲ For more details circle NED-451 D3 on enclosed inquiry slip ▲

Compressed Air
AT LOWER COST



FOR SPRAYING • CLEANING
CHUCKING • BLOWING
TEMPERATURE CONTROL
PNEUMATIC TOOLS
DIESEL STARTING
LIQUID TRANSFER • SAND BLASTING *and hundreds of other duties*

Quincy Compressors offer the lowest cost air supply consistent with efficient, dependable performance. All Quincy Compressors are modern in design, ruggedly built and compact. Sizes range from 1 to 90 in both air and water cooled models. Wide variety of mountings including portable models.

ONLY Quincy OFFERS ALL THESE FEATURES

Timken Taper Bearings • Cushioned Steel Valves • Semi-Steel Pistons • Lynite Connecting Rods • Balanced Crankshaft • Copper Finned Intercooler • Constant Level Oiling • Patented Loadless Starting.

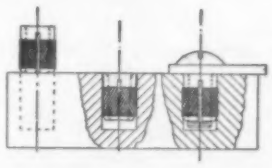
CATALOG AND PRICES Contains illustrations, specifications and features. Write Quincy Compressor Co., Dept. NE-29, Quincy, Illinois

Quincy COMPRESSORS
QUINCY COMPRESSOR CO.
QUINCY, ILLINOIS
Branch Offices: New York • Philadelphia • Detroit
Chicago • St. Louis • Dallas • San Francisco

▲ For more details circle NED-452 D3 on enclosed inquiry slip ▲

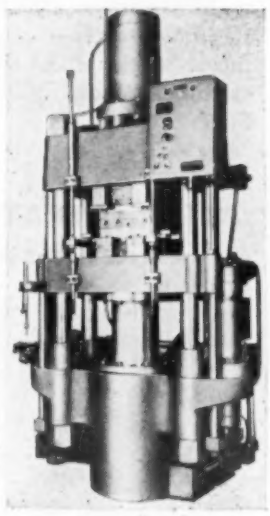
SCREW LOCKING INSERT
knurled band increases grip strength

Large band of diamond knurling on the grip area of Brush screw locking inserts affords excellent contact and resistance to torque when used in hard and dense materials, such as molded plastics or metal castings. Inserts require no special tools and are simply pushed into plain round holes. They provide screw threads for blind fastening in all kinds of materials. Inserts are made of aluminum as well as other materials and range in sizes to accept screws from 4-40 to ¼-20. Made by **Brush Nail Expansion Bolt Co.,** 30 Corrigan Lane, Greenwich, Conn.



▲ For more details circle NED-453 D3 on enclosed inquiry slip ▲

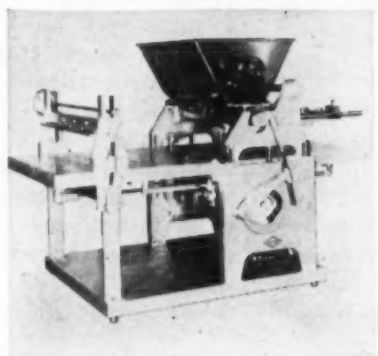
HYDRAULIC PRESSES
in 20 to 400 on pressure range



Capacities ranging from 20 to 400 tons are available in line of custom engineered hydraulic presses designed for plastic and rubber molding, but adaptable for widespread industrial use. Presses can include such features as self-contained fast traverse, governed pressures, up and down stroke, top or bottom transfer and semiautomatic pressure controls. Line of standard small presses for general use is also available. Made by **Logan Engineering Co.,** 4904 W. Lawrence Ave., Chicago 30, Ill.

▲ For more details circle NED-454 D3 on enclosed inquiry slip ▲

CONTAINER FILLING MACHINE
can fill and cap 120 units/minute



Paint, lubricant and chemical containers can be filled and capped at rate of up to 120 units per minute by this Geyer six-line filling machine. Fill units range in capacity from several ounces to quarts, and sizes up to gallons can be handled with extra parts. Containers are smoothly indexed through machine by combination walking beam and pin lug type push rods. Automatic feeder and agitator can be provided. Only one operator is required to work cap pressing device. All contact parts are bronze or stainless steel. Hoppers, valves and cylinders can be easily cleaned. Made by **Filler Machine Co.,** Philmont Club Station, Pa.

▲ For more details circle NED-455 D3 on enclosed inquiry slip ▲

HAND TRUCKS
offered in many models

Service requirements varying from light duty package handling to heavy duty industrial and shipping service can be accommodated by line of hand trucks, all built with welded tubular steel frames and ⅝-in. cold rolled steel axles. Three basic handle types are offered: the push-pull handle which is an integral part of the frame, the pin type handle with a tubular stub extension for one-hand use, and the twin type handle for two-hand operation. All have Gleason wheels of proper type, size and capacity. Most of the trucks have a solid or "closed" nose plate, but several have an "open" nose plate. Made by **Milwaukee Truck & Caster Corp.,** 6520-N W. River Pkwy., Milwaukee 13, Wis.

▲ For more details circle NED-456 D3 on enclosed inquiry slip ▲

New! Low-Cost! Wide-Range!
VARIABLE Speed Sheaves
Easily Attached to Any Machine

1/15 TO 15 HP.
RATIOS UP TO 8:1

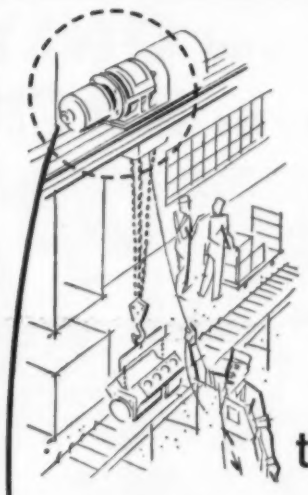
● Simple, sturdy Speed Selector Sheaves are applied to any machine in only a few minutes . . . giving you wide-range speed control at extremely low cost. You get wide speed variations with standard V-belts, since two variable pitch sheaves are used. Eliminates bulky sliding motor bases, movable jackshafts and wide, high-cost special V-belts.

- Standard V-belts
- Automatic belt alignment
- Fixed shaft centers
- LOW COST

Write FOR FREE BULLETIN

SPEED SELECTOR INC
118-N NOBLE COURT • CLEVELAND 13, OHIO

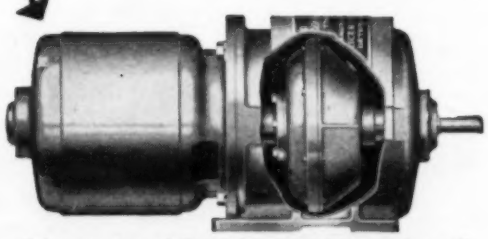
▲ For more details circle NED-457 D3 on enclosed inquiry slip ▲



Save with GÝROL FLUID DRIVE on electric traveling cranes

Lower initial cost: Fluid Drive units use a standard squirrel cage motor. Compared to a wound rotor motor, you save on motor, controls and installation costs. *Lower maintenance cost:* Controls are vastly simplified. No brushes, contacts or resistors to clean or replace. *Lower HP motors:* With Fluid Drive, motors reach 80-90% of starting torque before engaging the load. Thus, lower HP motors can often be used, improving over-all plant power factor. *Less pendulum action:* Fluid Drive provides smooth, stepless acceleration. Puts the load in motion with minimum jerking or swinging.

Advantages of American Blower Type TM Gýrol Fluid Drives



Cutaway view of Type TM Gýrol Fluid Drive unit

- Provides smooth flow of power. Shocks are absorbed in a cushion of oil. There's no metal-to-metal contact between driving and driven machinery.
- Offers by its inherent shearpin action, selective overload protection for both motor and driven machinery. Decreases machine "down" time.
- Available as a complete packaged unit suitable for either direct or belt connection to the driven machine. Minimizes alignment problems.

Free trial units are available to original equipment manufacturers

AMERICAN BLOWER
American Blower Corporation, Detroit 32, Michigan
Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

Serving home and industry: AMERICAN STANDARD • AMERICAN BLOWER
CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS EXCHANGERS

▲ For more details circle NED-458 D3 on enclosed inquiry slip ▲

Handling Fine, Dry Materials?

That Means DUST and a job for ROTO-CLONE

Fine dust from this paint pigment mixer is removed and collected by Type W ROTO-CLONE

Paint, chemical, food and pharmaceutical are typical industries having dust problems created by the mixing, blending, weighing or dumping of fine, dry materials. Effective control of such dust is a job for the Type W ROTO-CLONE. Here's why—unit combines dynamic precipitation with water sprays for high efficiency collection of these extreme fines. Its cost is low—space requirements small.

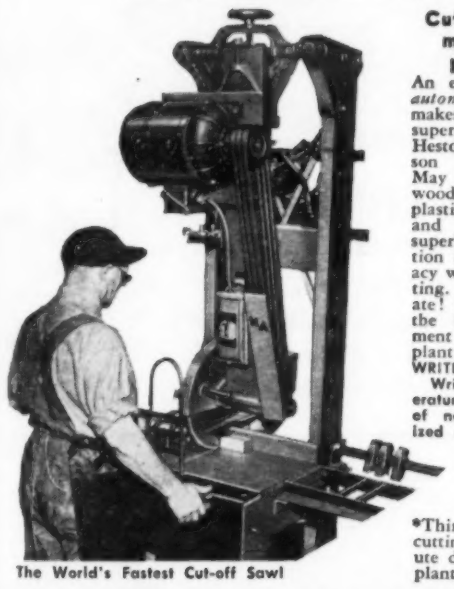
AAF's complete line of ROTO-CLONE equipment permits an unbiased analysis and economical solution of your dust problems. For immediate action, call your local AAF representative or write us direct.

American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-459 D3 on enclosed inquiry slip

Heston and Anderson announce fastest Cut-off Saw on the Market*

The answer to top-speed production for your plant or work shop.



The World's Fastest Cut-off Saw!

Cuts, wood, metal or plastic!

An exclusive new *automatic air unit* makes possible the super speed of the Heston & Anderson Swing Saw. May be used with wood, metal or plastic. Compact and sturdy, its superb construction insures accuracy with every cutting. Easy to operate! Here is truly the finest equipment for your plant or work shop. WRITE TODAY!

Write for FREE literature . . . name of nearest authorized dealer.

*Thirty-three wood cuttings per minute during routine plant tests.

HESTON & ANDERSON
DIVISION OF ST. PAUL FOUNDRY AND MFG. CO.
18-3A FAIRFIELD, IOWA

For more details circle NED-460 D3 on enclosed inquiry slip

NOELTING **Faultless** ALL-STEEL **TRUCK LOCK** WITH **2 PUSH-PEDALS FOR SAFETY!**

No more scuffed shoes from rough cast edges. No more soles torn away from shoe tops. Toe presses down on the Faultless Truck Lock—toe *does not lift*. Both foot pedals have non-slip treads for complete safety in operation.

Write for literature and specifications

FAULTLESS CASTER CORPORATION
Dept. NE, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.

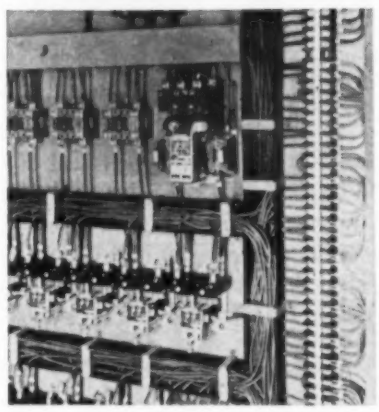
For more details circle NED-461 D3 on enclosed inquiry slip

DRILL PRESS with from one to four drill heads

Multiple operations involving drilling, tapping, reaming, burring and chamfering can be performed by this drill press, essentially a South Bend 14-in. precision model. Four types, equipped with from one to four drill heads, are available. Belt tension release provides quick speed changes and a free-floating spindle eliminates side thrust and whip. Unit incorporates built-in work light in each head, sealed ball bearings and approximate spindle speeds from 720 to 4325 rpm. Maximum capacity is 7 in. from spindle to column and 18 in. from chuck to table. Drill head positioning attachment gives each drill head assembly 4 in. of vertical adjustment at any one setting. Work tables vary from 14 x 15 in. for single spindle model to 14 x 55 in. for four-spindle model. Made by **South Bend Lathe Works**, 307 E. Madison St., South Bend 22, Ind.

For more details circle NED-462 D3 on enclosed inquiry slip

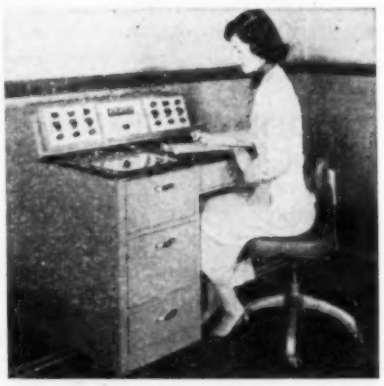
PANEL WIRING SYSTEM makes use of fiber channels



U-Shaped fiber channels are the main arteries for wiring in the recently developed channel method of electrical panel wiring. Designed for application to special-purpose machines, the system accomplishes savings in man-hours in panel construction, as well as savings in wire and training time for new personnel. Channel is fastened to the panel board above a row of devices. Its sides are perforated by a regular pattern of holes through which the wires are pulled for connection to the devices. With wiring complete, covers are fastened over the open face by wing nuts on studs. The wiring method eliminates need for detail planning and alterations are easily made. Developed by **Snyder Tool & Engineering Co.**, 3443 E. Lafayette Ave., Detroit 7, Mich.

For more details circle NED-463 D3 on enclosed inquiry slip

ELECTRONIC RECORDER remotely operates analog computer systems by built-in control units



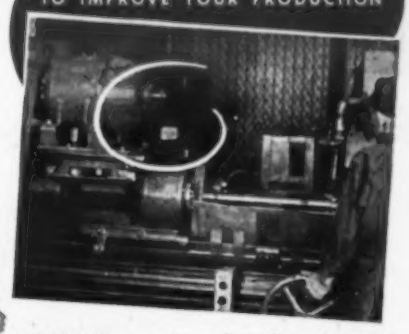
Designed for use with analog computers, the R5 GEDA electronic recorder provides remote operation of computer systems by built-in control units. Six recording channels are provided either in curvilinear coordinates (ink pens) or rectilinier coordinates (hot wire pens) as determined by operator. Desk-type console unit has ample writing and record storage space.

Sensitivity is continuously variable between calibrated steps from 0.1 to 100 v per millimeter. Input impedance is 2.5 megohms on 0.01 to 0.1- v/mm range and 10 megohms on all other ranges. Frequency response is flat to 100 cps when ink pens are used. Balance control can be used effectively to offset input signals in an amount equivalent to four times full-scale deflection without distortion. Power requirements are 105 to 125 v, 60 cps and about 350 w. Made by **Goodyear Aircraft Corp.**, Dept. 65A, 1210 Massillon Rd., Akron 15, O.

For more details circle NED-464 D3 on enclosed inquiry slip

By Makers of RELIANCE Precision-Built MOTORS

A QUALITY-BUILT ELECTRIC **SPEED INDICATOR** TO IMPROVE YOUR PRODUCTION



UNDER $50 COMPLETE (in quantities of 10)

- **IMPROVES** quantity and quality of machine output.
- **DETECTS** machine troubles before costly repairs become necessary.
- **REDUCES** spoilage of materials in process.

This sturdy instrument gives accurate speed indications between 100 and 5000 rpm.—special scales available for other indications. Get all the facts—write for Bulletin A-2406 today! A-52

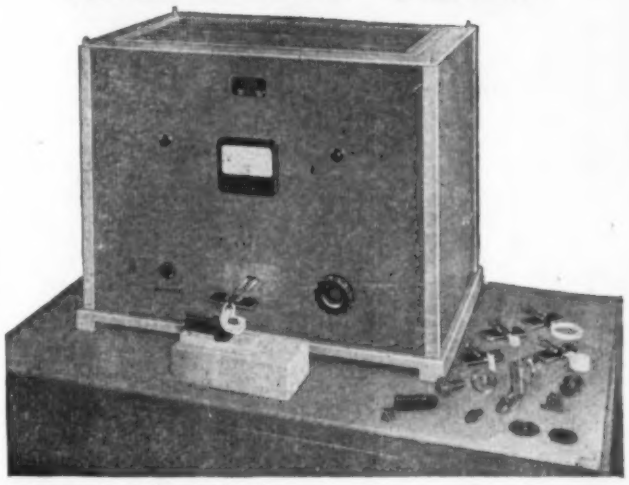
RELIANCE ELECTRIC AND ENGINEERING CO.
1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Offices in Principal Cities

For more details circle NED-465 D3 on enclosed inquiry slip

Lepel *presents*

A *Low Cost* PORTABLE HIGH FREQUENCY *Induction* HEATING UNIT



This versatile unit is priced so low that every shop may now take advantage of modern induction heating techniques to improve quality and to increase production. Its simplicity of operation eliminates the need for skilled personnel.

The Lepel Model 2 KW will meet the requirements of machine shops, toolrooms, research laboratories and educational institutions. It is especially suitable for hardening, brazing and soldering small parts of either ferrous or non-ferrous metals.

Complete unit with line connection and load coil **$870.** *f. o. b. factory*

- **SMALL AND COMPACT** Conveniently operated on bench or table—no mounting necessary.
- **ECONOMICAL OPERATION** No special power installation required. Operates on 110 volts, 60 or 50 cycle line at unity power factor.
- **FULLY GUARANTEED** Guaranteed for continuous duty cycle and stated performance.

WILL HEAT TO 1500° F.

⅛" steel rod 1" length in approx.	1 second
¼" " " " " "	3 seconds
½" " " " " "	15 seconds
1" " " " " "	60 seconds

Will melt 4 ounces of brass or steel in 4 minutes.
Equally well suited for heating of non-ferrous metals.

All Lepel equipment is certified to comply with the requirements of the Federal Communications Commission.

BRAZING Permits widest choice of silver or copper brazing alloys from lowest to highest melting points. Ideal for brazing carbide tips.

HARDENING Heat localized exactly where wanted at desired temperature. Ideal for gears, cams, bearing surfaces, cutting tools and other areas that are subject to wear.

SOLDERING Speedily and neatly performs intricate soldering applications with or without the use of pre-formed rings.

ANNEALING Ideal for annealing, stress-relieving, normalizing or pre-heating selected areas.

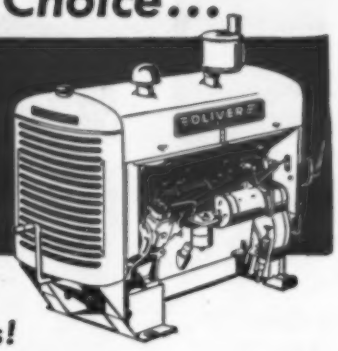
MELTING Readily melts quantities of ferrous and non-ferrous metals in either graphite or ceramic crucibles.

LEPEL HIGH FREQUENCY LABORATORIES, INC.
55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

For more details circle NED-466 D3 on enclosed inquiry slip

Your best Choice...

OLIVER POWER



4 sizes
3 fuel types!

Modern, dependable Oliver power units are available in carbureted engines for gasoline, LP-gas, or a *true* diesel that's easy to start. Power range from 31 to 73 horsepower.

Check these advantages:

- A price tag with a price that is really right.
- Interchangeable parts, between types, among all sizes.
- Interchangeable dimensions in each power class.
- All 6-cylinder engines, except the 31-horsepower unit.
- All have overhead valves . . . controlled oil systems . . . by-pass cooling . . . shock-mounted instruments.

Units can be supplied open, housed or bare with a variety of extra equipment for special applications. Write for full details. The OLIVER Corporation, Dept. F15-4, 400 West Madison Street, Chicago 6, Illinois.

OLIVER

"FINEST IN FARM AND INDUSTRIAL MACHINERY"

For more details circle NED-467 D3 on enclosed inquiry slip

Over Half of America's Top Companies Use "Speed Sweep"

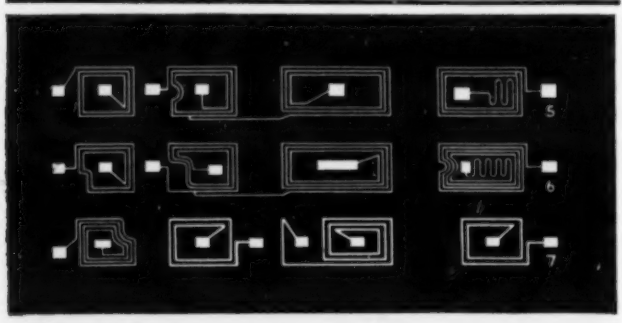
THE BRUSH WITH THE STEEL BACK

BECAUSE it sweeps faster and cleaner, and outlasts ordinary brushes 3 to 1, Speed Sweep has become the No. 1 sweeping tool of American Industry — used by over 50,000 firms. Whether you use a few or a lot of brushes, you'll find it pays to switch to Speed Sweep.

Write for styles, sizes and prices.

MILWAUKEE DUSTLESS BRUSH CO.
MILWAUKEE 3, WISCONSIN

For more details circle NED-468 D3 on enclosed inquiry slip



FOIL Your Circuit Troubles

. . . and Synthane laminated plastics with copper-foil on one or both sides, is one good way to do so. "Printing" circuits speeds up your operation . . . saves space . . . reduces the possibility of error. Synthane has pioneered in the production of copper clad laminates. Synthane laminated plastics with copper foil have good insulation resistance and are easy to punch or machine. We can supply foil-laminated Synthane in the grade and thickness you need . . . and in the quantity you require. Get complete information on copper-foil Synthane and its place in electronics. Use the coupon today.

SYNTHANE

Manufacturers of laminated plastics
SHEETS
RODS • TUBES
MOLDED-LAMINATED
MOLDED-MACERATED
FABRICATED PARTS

SYNTHANE CORPORATION
N.E. River Road, Oaks, Pa.

Gentlemen:
Please send me information on Synthane laminated plastics and its use in "printed" circuits.

Name_____
Address_____
City_____ Zone____ State_____

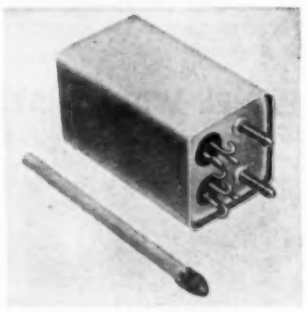
For more details circle NED-469 D3 on enclosed inquiry slip

ROUGHNESS SPECIMENS simplify surface finish checking

Low cost, yet practical means of determining smoothness or roughness of a surface is provided by line of roughness comparison specimens. Easy to use, they consist of various surface specimens individually finished to definite micro-inch readings and grouped together on finish-comparison bars. Operator holds the specimen bar opposite the work to make a visual comparison check of surface roughness, waviness and lay. The specimens can be furnished in about 1 x 1-in. round plug form and in approximately 1 x 1½ x 1 rectangular blocks, in boxes accommodating three, five or eight assorted surface finishes. Made by **Acme Industrial Co.**, Dept. NED, 200 N. Laflin St., Chicago 7, Ill.

For more details circle NED-470 D3 on enclosed inquiry slip

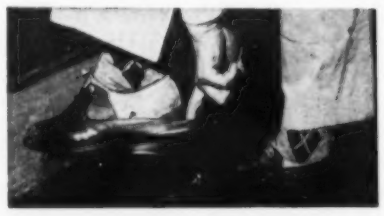
MINIATURE RELAY in resistances up to 15,000 ohms



Counterbalanced features of this miniature, hermetically sealed, double-pole double-throw relay enable it to withstand continuous acceleration of 50 g as well as the vibration and shock specified by MIL-E-5400. Certain contact combinations can be furnished with required coil power as low as 20 milliwatts, and any relay of this PR9100 series can be obtained with coil resistance as high as 15,000 ohms. One unit tested in the laboratory, functioned over 1¾ million times carrying a 3-amp resistive load at 28 v dc. Made by **Phaostron Co.**, Dept. NED, 151 Pasadena Ave., South Pasadena, Calif.

For more details circle NED-471 D3 on enclosed inquiry slip

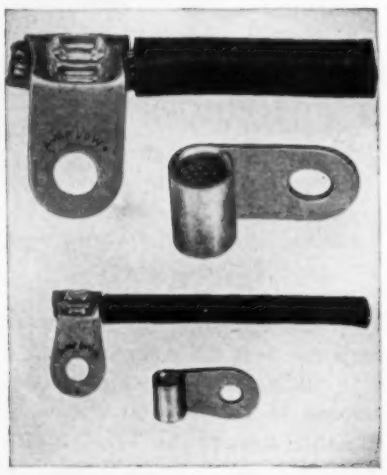
NEOPRENE OVERSHOES three sizes fit all shoe sizes



For men who work around oils, solvents, acids and other chemicals injurious to ordinary rubbers, these neoprene overshoes are highly practical. Weighing only 9 oz apiece, rubbers are extremely comfortable. Fabric liner is eliminated for elasticity of upper portion to assure firm grip on shoe and allow wearing rubbers for street and work. Small, medium and large sizes fit all shoe sizes from 6 to 12. When dirty inside, rubbers can be turned inside out for sponging. Made by **Tingley Rubber Corp.**, Dept. D, 903 Ross St., Rahway, N. J.

For more details circle NED-472 D3 on enclosed inquiry slip

SOLDERLESS TERMINALS for heavy duty electrical wiring



Available in eight wire sizes from No. 8 to No. 4/0, flag type solderless terminals are offered with tongues designed for wide range of stud sizes. Made of pure copper, they are electrotinned for maximum conductivity and surface protection. They can be used with solid, stranded or irregularly shaped wires or combinations of these types. Crimping can be done with hydraulic or pneumatic hand tool. Made by **Aircraft-Marine Products, Inc.**, 2100 Paxton St., Harrisburg, Pa.

For more details circle NED-473 D3 on enclosed inquiry slip

you can get in FAFNIR Ball Bearings this small

• For extremely small shafts in instruments, home appliances, cameras and projectors, fractional h.p. motors, Fafnir makes several series of extra small ball bearings . . . in metric bore sizes down to 4 mm and in inch sizes down to ⅛". Available with standard, special or super-precision tolerances. Three constructions . . . filling slot, non-filling or spring type retainers. Can be fitted with grease shields, felt seals, Mechani-Seals or Plya-Seals. If you want top performance on a small shaft — Fafnir has the answer. Write for new Instrument Bearing Catalog. The Fafnir Bearing Company, New Britain, Conn.

FAFNIR
BALL BEARINGS
MOST COMPLETE LINE IN AMERICA

For more details circle NED-474 D3 on enclosed inquiry slip

We tried FUSETRON dual-element FUSES on our Crane Motor Circuts... They Reduced Fuse Blows From 4 or 5 a day to only Three in Seven Months

Chas. A. Gardner, Chief Electrician
Nicholson Terminal & Dock,
Ecorse, Detroit Michigan

PROBLEM

"We have many overhead cranes that operate on 24 hour schedules. The severe service when loading and unloading ships throws a tough load on the motors—this caused us a lot of grief due to fuses blowing 4 or 5 times a day. Each blow caused a shutdown that stopped work and made men idle.

SOLUTION

"In testing Fusetron fuses to see if they would help us, we selected one crane and inserted Fusetron fuses in that circuit for one 8 hour shift. At the end of the shift we replaced the Fusetron fuses with the ordinary renewable fuses. Then we compared the down time of the crane due to fuse blows.

"To be sure the fuse blows weren't due to the operator, we changed around and would run the Fusetron fuses on two shifts and the old fuses on one.

"The results always came out the same. The Fusetron fuses would stand up under the hard service—and the ordinary fuses would not. As a result, we changed all fuses on our crane circuits to Fusetron fuses. In seven months we have had only 3 shutdowns of our cranes due to fuses blowing."

Don't Risk Losses!

One **needless** shutdown . . .
One **lost** motor . . .
One **destroyed** switch or panel
One **burned out** solenoid . . .
May cost you far more than replacing every ordinary fuse with a Fusetron dual-element Fuse.

Write for complete data.

BUSSMANN MFG. CO., University at Jefferson, St. Louis 7, Mo. (Division of McGraw Electric Co.)

FUSETRON
TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION
BUSS

For more details circle NED-475 D3 on enclosed inquiry slip

New Bostitch Stapling Plier with a Pointed Blade

For fastening almost any cardboard or corrugated container including those half-filled or loosely packed.

- Sharp blade penetrates easily and
- Clinches staples inside carton
- Leaves only small slit
- Seals and strengthens container

BOSTITCH fastens it better AND FASTER with wire

For a free demonstration call your local Bostitch representative. He's listed under "Bostitch" in your telephone directory. Or write: Bostitch 684 Mechanic St. Westerly, R. I.

For more details circle NED-476 D3 on enclosed inquiry slip

CUTTING COMPLAINTS

A pinch of dust or grit at your assembly line inspection bench or in the packing and shipping room can cause very expensive service calls later on. Spencer Vacuum is easily piped to each room and bench. It will speed production—save time in general cleaning and with special attachments, can collect water, pick up welding flux, reclaim materials and do 130 other jobs that are too expensive by hand. Ask for Bulletin No. 144.

with SPENCER HARTFORD VACUUM

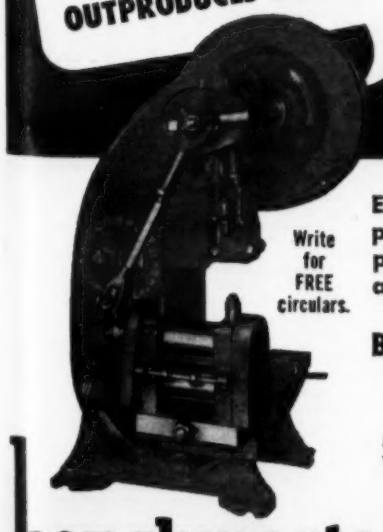
THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

SPENCER HARTFORD 466-H

For more details circle NED-477 D3 on enclosed inquiry slip

MAKES EVERY STROKE COUNT!

OUTPRODUCES SEVERAL OPERATORS!



Write for FREE circulars.

Every press stroke produces another part, or completes another operation, with the new BENCHMASTER FRICTION ROLL FEED!

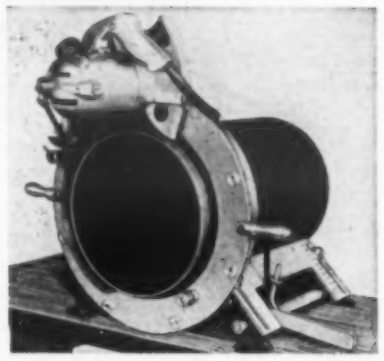
5 sizes—from 1½" to 9" widths. Adaptable for all presses.

benchmaster PUNCH PRESSES AND MILLERS

1835 W. Rosecrans Ave. Gardena, California

For more details circle NED-478 D3 on enclosed inquiry slip

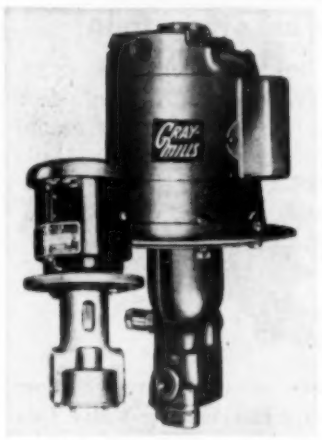
POWER CUT-OFF SAW cuts up to 12-in. diameter pipe



Operating directly from 110-v ac power source, Super Speed power cut-off saw is offered in one model for ½-in. tubing through 6-in. pipe and other for ½-in. through 12-in. pipe. Abrasive cutting wheels cut aluminum, copper, stainless, steel and other metals clean, square and without burrs. Saw mounts on free-moving rotating ring which encircles pipe to be cut. Saw travels around ring to make cut. Made by **Tri-Clover Machine Co.**, 2910 60th St., Kenosha, Wis.

For more details circle NED-479 D3 on enclosed inquiry slip

SELF-PRIMING GEAR PUMPS for 1, 2, and 3 gpm fluid deliveries



Line of gear pumps for coolants, oils, solvents and emulsions in machine tools, circulating systems and small sprayers is offered in three sizes for deliveries of 1, 2 and 3 gpm at 100 psi. Motor sizes available are 1/25, ¼, ⅛ and ½ hp. Units are self-priming, directly connected to face mounted motors. They mount vertically, either immersed in shallow tanks or with inlet pipe dropped to liquid. Relief valve, inlet filter and various mounting flanges are optional. Made by **Graymills Corp.**, 3717 N. Lincoln Ave., Chicago 13, Ill.

For more details circle NED-480 D3 on enclosed inquiry slip

HEATING & WEED BURNING TORCH operates directly from propane tank

Weed burning, asphalt road repair, right-of-way maintenance, tar melting, preheating, thawing, descaling and other heating operations are performed efficiently with this superheating torch. It operates at tank pressure from any propane tank and produces 391,995 Btu per hour in model B-1 and 600,000 Btu per hour in model B-2. Both are light weight and easy to handle. Prices are $22.50 and $45.00 respectively. Made by **Weldit, Inc.**, 993 Oakman Blvd., Detroit 6, Mich.

For more details circle NED-481 D3 on enclosed inquiry slip

METAL CUTTING SAW can be loaded from front or side

Of the overarm type with an open frame, the 10 x 10-in. standard model metal cutting saw is designed for general purpose work and loads from front or side. It replaces the 9 x 9-in. standard model and has a heavier overarm for carrying and guiding the saw frame. The heavy U-type saw frame has wider shoulders than its predecessor, this feature adding more rigid control of the saw blade for greater sawing accuracy. Frame also has replaceable, hardened and ground steel bearing shoes. Work-clamping vise is arranged to clamp work from 90 to 45 degrees. A centrifugal coolant pump is incorporated. Made by **Peerless Machine Co.**, Dept. N, 1600 Junction Ave., Racine, Wis.

For more details circle NED-482 D3 on enclosed inquiry slip

KLIXON Thermo Snap CONTROLS

Provide Dependable Temperature Control in York-Shipley Boiler Units

York-Heat oil-fired table-top boiler units, manufactured by York-Shipley, Inc., York, Pa., are designed to do an outstanding job of home and hot water heating.

To insure accurate temperature control, York-Shipley uses Klixon Thermo-Snap Controls in all their units. Mr. H. Leroy Mohn, project engineer, writes: *"We insist on Klixon Thermo-Snap Thermostats in our house heating boilers because we find they accurately control unit operation. Klixon C4370 thermostats are used to control the operation of burners and circulators to automatically govern the temperature of the home and domestic hot water."*

What's your temperature control problem? Klixon Thermo-Snap Controls are meeting the requirements for military and civilian products, daily.

Write for further information.

SPENCER THERMOSTAT
Division of Metals & Controls Corporation
1904 FOREST ST., ATTLEBORO, MASS.

KLIXON

For more details circle NED-483 D3 on enclosed inquiry slip

TEST IT FREE! Samples of VELLUM are yours for the asking. Send for this kit today.

Write on your company letterhead for sample kit, sent without obligation

Ageproof VELLUM

Permanently super-transparent AGEPROOF makes better prints now, or years from now

This is the famous Dietzgen vellum that combines a perfect drafting surface with perfect reproduction qualities. And AGEPROOF VELLUM cannot turn yellow, become brittle or lose transparency with age.

Plasticized through and through, AGEPROOF VELLUM contains no oil, no wax to bleed, become rancid or turn color. Because the plastic transparentizing agent permeates every fibre, you can erase repeatedly without troublesome ghosts occurring in prints, and redraw without feathered lines if you are using ink.

Available in three different weights, in frost-white or eye-easing blue. Test AGEPROOF VELLUM and you'll never use any other material for important tracings.

EUGENE DIETZGEN CO. • Chicago • New York • San Francisco New Orleans • Los Angeles • Pittsburgh • Washington • Philadelphia Milwaukee • *Dealers in All Principal Cities*

DIETZGEN EVERYTHING FOR DRAFTING SURVEYING & PRINTMAKING

Free Samples!

For more details circle NED-484 D3 on enclosed inquiry slip

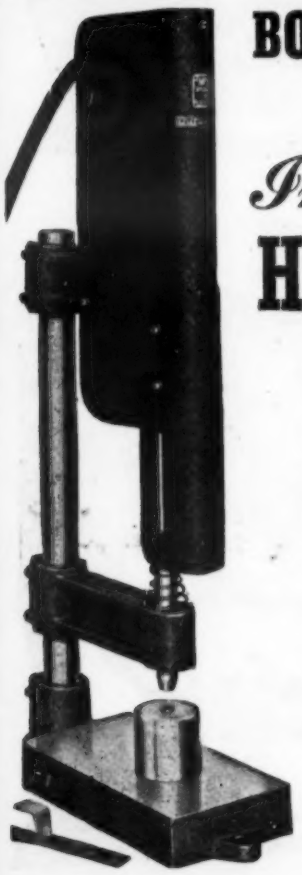
Gets your men up to any working level quickly, safely! Adaptable to any job, inside or out! Bridges obstacles, adjusts to uneven floors or stairways. Locking casters. Patented. U. L. approved. Designed especially for painting and maintenance work . . . its uses are unlimited.

Other Bil-Jax profit-makers include tower scaffolding, swing scaffolds, sidewalk bridges, ladder jacks, steel ladders . . . all of simple, sturdy design to give a lifetime of service, safety and satisfaction. Rent or buy. Distributors in principal cities.

Write for complete catalog. Address Dept. Z-4

BIL-JAX, INC., Archbold, Ohio, U. S. A.

For more details circle NED-485 D3 on enclosed inquiry slip



BOOST OUTPUT with *Impact* AIR HAMMER

the efficient modern method for

PUNCHING . . . . . RIVETING
ASSEMBLING . . . . . EMBOSSING
FORGING . . . . . FORMING
PEENING . . . . . MARKING
CRIMPING . . . . . CUTTING
BLANKING . . . . . COINING

Ready . . . Mead's new air-powered Impact Hammer . . . weighing only 27 pounds . . . yet having a wallop like a pile-driver! One of its outstanding applications is multiple piercing of large metal sheets before or after forming. It can punch holes as close together as 1¾" on centers. Value of the impact readily adjusted from 4,500 pounds down to only a few ounces. Set ups are quick, easy. Besides innumerable punching operations, with suitable attachments it is capable of upsetting rivets, blanking out soft materials with knife dies, light coining, forging operations, etc. Get complete facts on this versatile, handy new tool and other Mead Air Power devices. Write for Catalog.

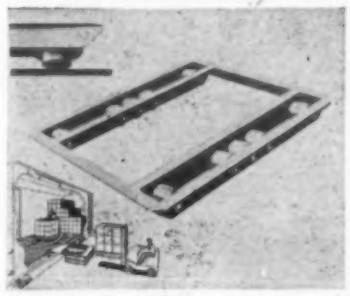
MEAD AIR OPERATED DEVICES save precious man-hours!

CATALOG READY
Send for copy of our new Air Power Catalog illustrating, describing many new man-and-money-saving devices.

MEAD SPECIALTIES COMPANY
4114 NORTH KNOX AVENUE
DEPT. NA-43 • CHICAGO 41, ILL.

For more details circle NED-486 D3 on enclosed inquiry slip

PALLET ROLLER
features large crowned rolls

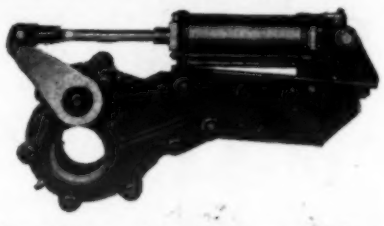


Pallets can be moved in and out of refrigerator cars and trucks with slatted floors and over uneven surfaces with the improved Ace Reefer King pallet roller. It is equipped with heavy-gage large-diameter rolls with crowned ends for free rolling and floor protection. Bearings are heavy duty lubricated type and the frame is weld-constructed of high tensile strength steel. Design maintains parallelism and alignment of the frame under all conditions and permits 360-degree movement of loaded pallets. Three sizes, all with 4000-lb capacity, are offered: 36 x 36 in., 42 x 36 in. and 42 x 42 in. Made by **Frank L. Robinson Co.**, 508 Sixteenth St., Oakland 12, Calif.

For more details circle NED-487 D3 on enclosed inquiry slip

QUICK-ACTING VALVES
actuated by air or other fluid

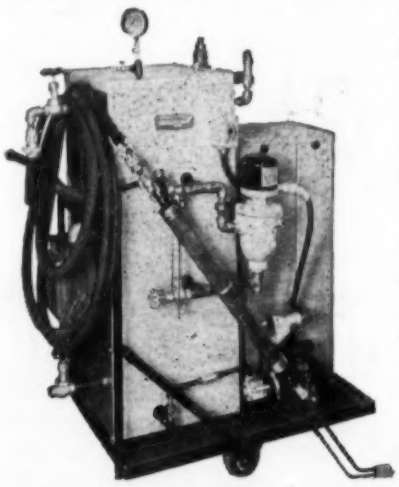
Designed for actuation by air or other fluid, cylinder operated quick-acting valves can be regulated to any speed. They can also be electrically or manually remote controlled, besides permitting automatic cycle operation and multiple operation by one man. Power control eliminates operator fatigue. Valves have straight-through flow and drop tight seal. Made by **Everlasting Valve Co.**, 49 Fisk St., Jersey City 5, N. J.



For more details circle NED-488 D3 on enclosed inquiry slip

STEAM-JET CLEANER
units for 220, 440, 550 v ac power

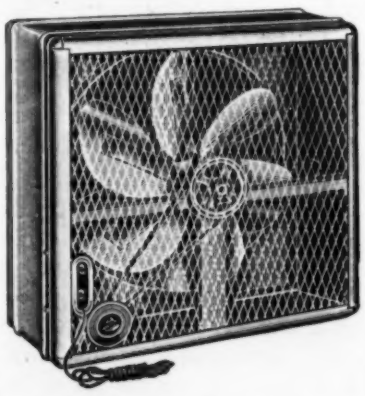
Fast, indoor steam cleaning with safety from fire hazards or flooding of work area is afforded by the Speedylectric steam-jet cleaner with automatic balanced control. Compact, portable units are available for operation on 220, 440 or 550-v ac power. Operation of steam generator, regulation of detergent flow and atomization with steam at the jet are fingertip controlled at the steam gun or lance. Cleaners are practical for industrial and processing plants, textile mills, oil refineries, foundries and chemical works. Made by **Livingstone Engineering Co.**, Dept. 165, 100 Grove St., Worcester 5, Mass.



For more details circle NED-489 D3 on enclosed inquiry slip

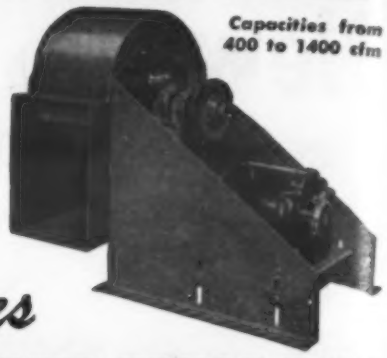
REVERSIBLE WINDOW FANS
two models deliver 5000 and 6700 cfm

This electrically reversible window fan available in 24 and 30 in. models will blow air in or exhaust air at flip of a switch. Units feature two-speed flexibility and can be installed in either lower or upper portion of double-hung windows. Fittings are furnished for both types of installation. Split-phase motors are resiliently mounted for quiet operation. At high speed the 24-in. fan delivers 5000 cfm, while the 30-in. model delivers 6700 cfm. Made by **Emerson Electric Mfg. Co.**, 8108 Florissant Ave., St. Louis 21, Mo.



For more details circle NED-490 D3 on enclosed inquiry slip

nyb *Announces*



TWO NEW BELTED JUNIOR FANS No. 76 and No. 91

Developed to meet popular demand for a small, adjustable speed V-belt fan, which is quiet in operation and where fan speed can be adjusted in the field.

CAST ALUMINUM SLOW SPEED WHEEL is ideal to meet requirements of small ventilating problems where quiet operation is demanded and precise quantities of air are to be handled. In order to use the Slow Speed wheel for this service, belt driven units are necessary.

RUGGED CONSTRUCTION • Realizing that quiet fan operation requires sturdy construction, the same type all-welded steel housing is used as in the larger *nyb* ventilating fans.

Write for Bulletin 530

nyb THE NEW YORK BLOWER COMPANY
SALES OFFICES • 32nd STREET and SHIELDS AVENUE • CHICAGO 16
FACTORY, LAPORTE, INDIANA

For more details circle NED-491 D3 on enclosed inquiry slip

modernize materials handling with

CARGOTAINERS

Cargotainers are designed to keep pace with modern methods of materials-handling because they are: 1. Sturdy and resistant to shock; 2. Readily folded when not in use; 3. Open mesh so that contents may easily be seen for quick inventory; 4. Efficiently designed for shipment, assembly line use, and vertical storage. Write for information concerning the new CLEARVIEW model with its exclusive base construction for greater durability and better locking and stacking. Dept. NED, Pittsburgh Steel Products Co., Grant Bldg., Pittsburgh 30, Pa.

Pittsburgh Steel Products Company
A Subsidiary of Pittsburgh Steel Company

For more details circle NED-492 D3 on enclosed inquiry slip

Flexible

Improved New
VARGLAS SILICONE
Tubing and Sleeving

Now Varglas Silicone has been made more flexible. Sharp turns and 90° bends cause no cracking or peeling — no loss of dielectric strength.
As pioneers in the manufacture of silicone sleeving and tubing, we know this is the greatest improvement made during the past ten years. Unexcelled where high temperatures must be withstood for several hours — not just for 15 minutes. You need not sacrifice abrasion resistance and toughness to get flexibility. The new Varglas Silicone sleeving and tubing will pass cold bend tests at 35° to 40° LOWER temperature than formerly.

The only Class H insulation with all these features:

Efficient from 500° F. to — 85° F.
Moisture and Fungus Resistant
Flame Resistant — Self extinguishing
Abrasion Resistant
Dielectrically Strong with average readings up to 7,000 volts.
Available in 10 colors — at no extra cost.

Samples of Varglas Silicone products as well as samples of our complete line of tubing and sleeving are available in a convenient sample folder. Just drop us a line telling us your problem and its peculiarities.

Varflex CORPORATION
Makers of Electrical Insulating Tubing and Sleeving

VARFLEX *Sales Co., Inc.*
310 N. Jay St., Rome, N. Y.

For more details circle NED-493 D3 on enclosed inquiry slip

SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire—no shock.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

▲ For more details circle **NED-494 D3** on enclosed inquiry slip ▲

UNIVERSAL DRILL BUSHINGS

establish new standards of high quality

Universal Drill Bushings, produced at the big, modern plant of the Universal Engineering Company, have been first in industry for more than 25 years. They are accurately machined with superhoned bores from the finest quality steel and carefully inspected to insure maximum efficiency and extremely long life. Write today for complete information.

The modern home of finer production tools

UNIVERSAL ENGINEERING COMPANY

FRANKENMUTH 5, MICHIGAN 156-A

▲ For more details circle **NED-495 D3** on enclosed inquiry slip ▲

C.H.F. Sectional Tables WITH SWING SEATS

MAXIMUM SEATING IN ANY SIZE SPACE

For Recreation Rooms . . . Factory Work Tables

Available in units to seat 4 to 24 people, "CHF" Sectional Tables may be purchased in varying lengths to meet your exact requirements. Seats swing completely under table out of the way to give you full aisle space. Your choice of seats . . . with or without backs . . . cast iron frame construction in a variety of colors. "CHF" Sectional tables are standard equipment for schools, factories, clubs, churches and all types of institutions.

WRITE FOR ILLUSTRATED CATALOG AND PRICE LIST!

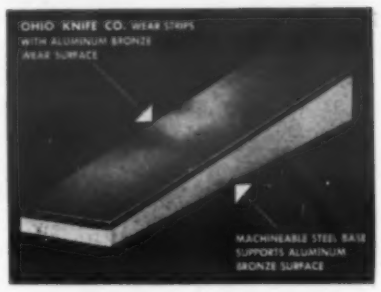
THE CHICAGO HARDWARE FOUNDRY CO.

"Dependable Since 1897"

1943 Commonwealth Ave. North Chicago, Ill.

▲ For more details circle **NED-496 D3** on enclosed inquiry slip ▲

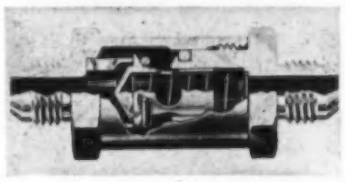
WEAR STRIPS
wearing surface is aluminum bronze



To minimize the amount of bronze needed, a special method of bi-metal welding is used to make OK wear strips of Ampco bronze. Long wear is achieved, because surface is aluminum bronze instead of cast phosphorous bronze. Surface is welded to soft steel base, readily machinable to required thicknesses. Large assortment of sizes is available, or can be made to special order. Made by **Ohio Knife Co.**, Dept. 8, Dreman Ave., Cincinnati 23, O.

▲ For more details circle **NED-497 D3** on enclosed inquiry slip ▲

FLOW LIMITER VALVE
adapts as excess flow or dump valve



Design of this flow limiter valve allows flow in one direction up to any predetermined rate, but shuts off quickly to prevent higher flows while allowing unrestricted flow in the opposite direction. Unit serves equally well as an excess flow, automatic drain or dump valve. Exact repeatability together with dead-tight closing is achieved. Valves are made with male tube or pipe connections on discharge side in restricted flow direction and with either male or female connections on inlet side. Made by **James-Pond-Clark**, 2183 E. Foothill Blvd., Pasadena 8, Calif.

▲ For more details circle **NED-498 D3** on enclosed inquiry slip ▲

TANK CAR PLATFORM
swings over curved tank car top

Hazard of a man standing and working on the slippery curved tank top of railroad tank cars during loading and unloading operations is eliminated by use of the safety tank car platform. It is supported on a steel column which is bolted upright to a concrete base alongside or between two railroad tracks. Platform turns 360 degrees to service cars on adjacent tracks. Platform can be turned by crank only when the operator holds down a foot brake. Piping on the platform is supported by adjustable chains attached to overhead bracing and leads down through the supporting column to underground storage. Made by **Nichols Engineering Co.**, Dept. A-6, 3816 W. Grand Ave., Chicago, Ill.

▲ For more details circle **NED-499 D3** on enclosed inquiry slip ▲

BOLT HOLE CLEANER
collects dust from rock drilling

Dust produced in rock drilling in mines and other locations can be collected by the MSA bolt hole cleaner, offered in several models and approved by the U. S. Bureau of Mines. Units available are: a mechanically driven vacuum pump unit for permanent mounting on electric rotary drills or compressors; an electrically driven and self-contained unit with 1-hp explosion-tested motor and control; and a compressed air driven unit, offered in models that use 22 cfm of air per minute and 25 ft of collecting hose and another that uses 65 cfm of air and a 200-ft hose. Operation can be in any of seven different ways. Available from **Mine Safety Appliances Co.**, 220 N. Braddock Ave., Pittsburgh 8, Pa.

▲ For more details circle **NED-500 D3** on enclosed inquiry slip ▲

For lab melts, pilot plant and small production . . .

The PT POT TILTING Furnace

This Detroit Electric Furnace has been specially developed to produce small melts of any metal with ease, economy and speed. 15-pound capacity pot can be used as a crucible or tilted to pour directly into molds. Roof lifts and swings for easy loading. Complete with controls. Full information on request.

WRITE FOR DETAILS

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1060 26th St. • BAY CITY, MICHIGAN

Foreign Representatives: In BRAZIL—Equipamentos Industrias "Eisa" Ltd., Sao Paulo; CHILE, ARGENTINA, PERU and VENEZUELA: M. Castellvi Inc., 150 Broadway, New York 7, N. Y.; MEXICO: Casco, S. de R. L. Atenas 32, Despacho 14, Mexico City, D. F.; EUROPE: ENGLAND, Birlec, Ltd., Birmingham

▲ For more details circle **NED-501 D3** on enclosed inquiry slip ▲

What's YOUR Heating or Air Conditioning Control Problem?

. . . with their 60 years of experience installing pneumatic systems of temperature and humidity control in all types of important buildings are well qualified to help you obtain the greatest return from an investment in — **ACCURATE UNIFORM CONTROL** in all types of heated or air conditioned spaces—offices, factories, process rooms, processes, research and test laboratories, packaging or storage rooms. You can gain . . .

Increased Efficiency and Output of Workers by keeping each room or department at its proper temperature.

Cuts Heating Costs up to 25%—23% fuel savings reported by E. R. Squibb & Sons. With today's higher fuel costs bigger savings than ever before are possible with Powers control. It eliminates fuel wasted by OVER-heating with manual operation.

Precision Control for Processes—Wherever product uniformity and quality are dependent upon precise temperature and humidity regulation use Powers controlling, indicating or recording instruments.

Phone or Write Powers Nearest Office for aid in selecting the type of automatic control that will give best results for your requirements. There's no obligation. Powers control systems can be installed in existing as well as new buildings.

Some Prominent Users of Powers Control:
Ford Motor Co.
Chrysler Corp.
Esso Research Center
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Bendix Aviation Corp.
Goodrich Tire & Rubber Co.
Eastman Kodak Co.
Pepperell Mfg. Co.
Armour & Co. • Swift & Co.
Bachmann Uxbridge Corp.
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N. Y. Stock Exchange

(a99)

THE POWERS REGULATOR CO.

Skokie, Ill. • Offices in Over 50 Cities, see your phone book.

OVER 60 YEARS OF TEMPERATURE AND HUMIDITY CONTROL

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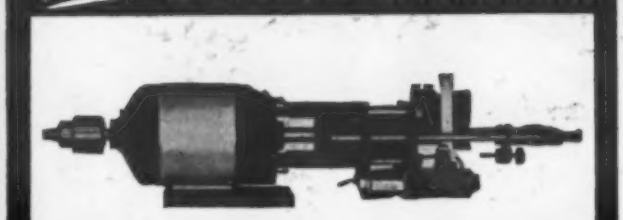
New BLACK SELF-CONTAINED DRILLING UNITS



NO SPLINES — Self-contained units, at low cost, for drilling, tapping, chamfering, reaming and similar operations.

NO GEARS — New principle employs traversing motor shaft for work spindle, applies even torque with practically no end play. Drill has air feed for rapid advance to work—hydraulic control to completion of work cycle with uniform feed. Tapping unit controlled so tap follows its own lead without chamfering first thread or stripping threads on return stroke. Easy adjustment—depth accuracy to within .001".

NO CAMS

NO CLUTCHES

NO REVOLVING WEIGHTS — Operate in any position. Wide range of speeds and sizes.

Write for complete information

BLACK DRILL COMPANY, INC.
1380 EAST 222nd STREET CLEVELAND 17, OHIO

For more details circle NED-503 D3 on enclosed inquiry slip

FLOW COLD* answers your temperature control problems

You get increased production and lower costs for efficient industrial process temperature control when you specify ACME FLOW COLD*

*Trade Mark

for these USES	with these ADVANTAGES
coolant cooling	economical
solution cooling	compact
production welding	rugged
mold cooling	complete
laboratory cooling	saves water by recirculation
cooling chemicals	factory assembled and tested
cooling drinking water	easy to install
air conditioning plants	easily controlled
or offices	ready to connect

Let an ACME Engineer help you solve your temperature control problem. Write today, for more information on your cooling problem. Address Dept. FC.

ACME PRODUCTS — ACME INDUSTRIES, INC.
JACKSON, MICHIGAN

Continuously serving the Refrigeration and Air Conditioning Industry since 1919

For more details circle NED-504 D3 on enclosed inquiry slip

SPRAY NOZZLES

...FOR LOWER COST

Spray Nozzles alone can often materially reduce spraying costs. Spraying Systems Co. has proved this again and again. Write for Catalogs 22 and 23 . . . and see for yourself.

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3211 Randolph Street • Bellwood, Illinois

☐ Send me Catalog No. 22 ☐ Send me Catalog No. 23

Name_____
Company Name_____
Address_____
City_____ State_____

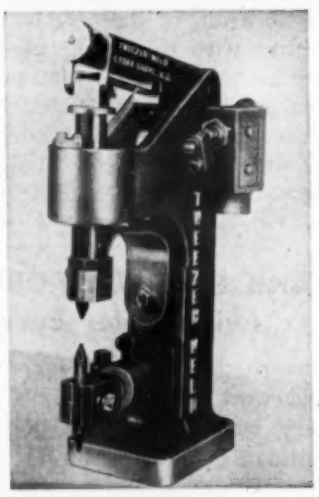
For more details circle NED-505 D3 on enclosed inquiry slip

DRAGLINE CONVEYOR TRUCKS design prevents weaving in motion

One-piece arc welded frame is incorporated in this conveyor truck for use with dragline conveyors in warehousing and other operations. This type of system makes use of a truck which has an A-frame consisting of two diagonal channels, two V-type hangers, and a tubular housing for the axle and inside wheel washers. A-frame design permits the main wheels to be mounted close to the truck sides for load stability. Caster alignment and hanger mounting of main wheels prevents weaving while the truck is in motion. A push bar permits manual handling when the truck is not attached to the conveyor. Made by **Lewis-Shepard,** Dept. R-5, Watertown 72, Mass.

For more details circle NED-506 D3 on enclosed inquiry slip

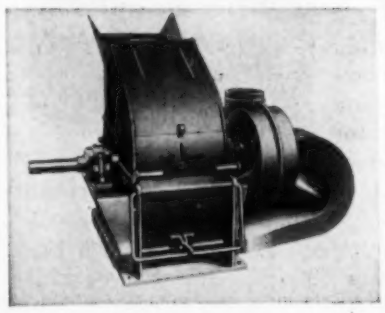
HEAVY DUTY WELDING HEAD assures uniform welds at high speed



Suitable for range of ¼ to 3 kva, Tweezer-Weld heavy duty welding head features automatic follow-through pressure to assure uniform quality welding at high speed. When in welding position, working electrode is free vertically and has only the adjusted pressure of the follow-up spring on it. Friction-free linear motion is obtained through use of a Thompson Ball Bushing to eliminate binding. Made by **Federal Tool Engineering Co.,** 1384 Pompton Ave., Cedar Grove, N. J.

For more details circle NED-507 D3 on enclosed inquiry slip

HAMMER MILL screens changed without shutdown



Screen replacement in a few seconds while machine is operating is feature of this Quick-Screen-Change hammer mill. Offered in 20 to 125-hp sizes, mills can be direct connected or belted. Screen is withdrawn and replaced by sliding it in nonbinding grooves. Lever lock is tripped and wing nut loosened to release the hand guard. Made by **Schutte Pulverizer Co.,** 31 Clyde Ave., Buffalo 15, N. Y.

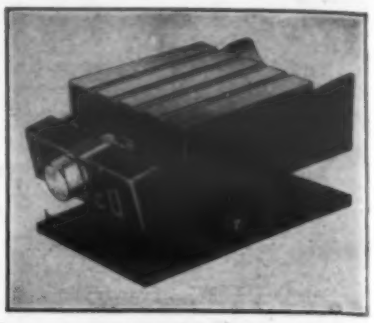
For more details circle NED-508 D3 on enclosed inquiry slip

DRIVING GAGE indicates engine efficiency

Vehicle operators can tell at a glance when their engine is wasting gas, operating most economically or when it needs adjustment or service with the Sun driving gage. Precision Bourdon tube instrument is mounted in corrosion-resistant metal case with polished chrome bezel. Simple dial features indirect illumination for night driving and single three-color band with red for power, green for economy and orange for decelerate. Gage mounts on instrument panel or steering column. It can be used with any automotive type gasoline engine and is supplied with installation fittings. Made by **Sun Electric Corp.,** Tachometer Div., 6389 N. Avondale Ave., Chicago 31, Ill.

For more details circle NED-509 D3 on enclosed inquiry slip

IMPROVED MACHINE LEVELING JACK is 50% stronger yet lower in height.



Engineering improvements have made this Jack 50% stronger yet lower in height. This was accomplished by redesigning the Empco Jack so that the adjusting screw always remains cradled in the assembly. This insures full bearing of either front or back collar at any stage of operation.

Once the machine is set on Empco Jacks, the simple turning of adjusting screw, with a hand wrench will lower or raise the machine until your level indicator reads "zero". With this feature, periodic machine leveling can be done in a matter of minutes.

To reduce vibration, Vi-Sorb Mounting Pads are available with each style Empco Jack. These pads substantially reduce vibration, the percentage of reduction usually depends upon the thickness of the pad that is used.

Level machine installations with periodical re-leveling is essential to lower costs of machine maintenance. These costs are further reduced by the use of Vi-Sorb Mounting pads under every Empco Leveling Jack.

Available in three styles: JC-1 (standard) and JC-2 (heavy duty) pictured here, and the newest style JS particularly designed for use with anchor bolts. Many models in all styles with minimum height ranging from 1⅞" to 4".

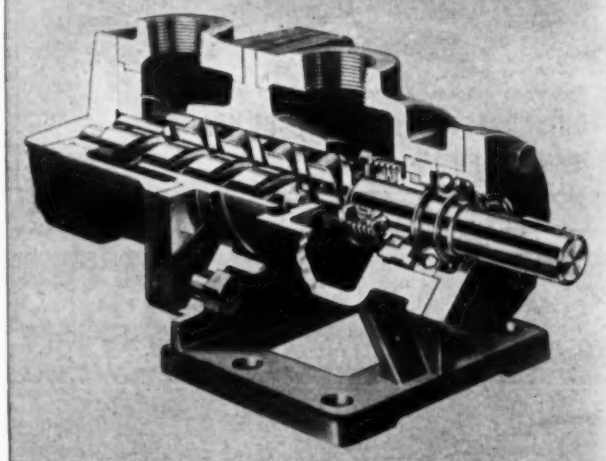
For complete specifications and prices write the **Enterprise Machine Parts Corporation,** 2727 Jerome Ave., Detroit 12, Michigan. *Advt.*

For more details circle NED-510 D3 on enclosed inquiry slip

DE LAVAL IMO PUMPS

Your De Laval Field Representative can help solve your pumping problems.

Profit by his sound, versatile experience. He can aid you in selecting the IMO Pump you need... give you facts and figures on performance . . . bring valuable judgment to bear on your specific fluid handling application.



For example, De Laval-IMO Series A313B Pump handles light or viscous fluids in hydraulic systems, rotary and steam atomizing oil burners, lubrication, governing systems and similar services. Use it for capacities to 80 gpm, pressures to 275 psi and intermittent pressures to 325 psi.

IMO Rotary Pumps have only three moving parts . . . offer all these advantages: high speed operation, quietness, freedom from vibration, simplicity and reliability. Models can be furnished for almost any fluid handling problem in capacities to 750 gpm and pressures to 1,500 psig. *Ask for Bulletin LG-A which gives data in chart form on the wide range IMO line.*

DE LAVAL *IMO Pumps*

DE LAVAL STEAM TURBINE COMPANY
808 Nottingham Way, Trenton 2, New Jersey

For more details circle NED-511 D3 on enclosed inquiry slip

HOT MELT PLASTIC COATINGS for GEARS • TOOLS • PRECISION PARTS

BEFORE SECONDS AFTER

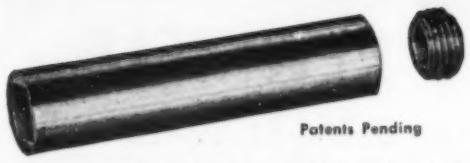
Dip Coated • Protected

DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
476 Frelinghuysen Avenue, Newark 5, N. J.

▲ For more details circle NED-512 D3 on enclosed inquiry slip ▲

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



Patents Pending

One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.

The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES:
3/16, ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, 1"

Write for Literature

STURDY BROACHING SERVICE
23514 TELEGRAPH RD., DETROIT 19, MICH.

▲ For more details circle NED-513 D3 on enclosed inquiry slip ▲

LOGAN AIR AND HYDRAULIC POWER

SPEEDS • COORDINATES • REFINES PRODUCTION
IN OVER 10,000 INDUSTRIAL PLANTS

AIR-DRAULIC CYLINDERS • AIR CYLINDERS • AIR CONTROL VALVES • AIR CHOCKS • HYDRAULIC CONTROL VALVES • HYDRAULIC CYLINDERS • HYDRAULIC POWER UNITS • SURE-FLOW COOLANT PUMPS • PUMPS • COLLET GRIP TUBE FITTINGS • AIR AND HYDRAULIC PRESSES

Logan
AIR CONTROL VALVES

- BALANCED PISTON
- COMPACT DESIGN
- EASILY INSTALLED
- SELF-CLEANING

79 MODELS
MOSTLY STOCK DELIVERY

SAVES TIME Logan AIR AND HYDRAULIC EQUIPMENT LOGANSPORT, INDIANA

LOGAN MANUFACTURES 6,975 STANDARD CATALOGED ITEMS • CATALOG ON REQUEST
Consult Logan for your Special Heavy-Duty, Mill-Type Cylinder requirements.

LOGANSPORT MACHINE CO., INC.
808 Center Avenue Logansport, Indiana

▲ For more details circle NED-514 D3 on enclosed inquiry slip ▲

PORTABLE AIR COMPRESSOR rated capacity is up to 75 cfm

Hornet 75 portable air compressor is rated at 75 cfm and is designed for standby service or production work. The single-stage gasoline powered compressor weighs 1280 lb and can be towed at high speed behind a passenger car. It uses a six-cylinder Chrysler engine rebuilt so that three cylinders are used for air compression and the other three for power. Unit is mounted on a three-wheel trailer, with pivot wheel retractable. Lockable tool boxes are located on each side. Compressor can handle a 45-lb pavement breaker or rock drill, or two backfill tampers, clay spades or riveting guns. Made by **O. K. Clutch & Machinery Co.**, Florence St., Columbia, Pa.

▲ For more details circle NED-515 D3 on enclosed inquiry slip ▲

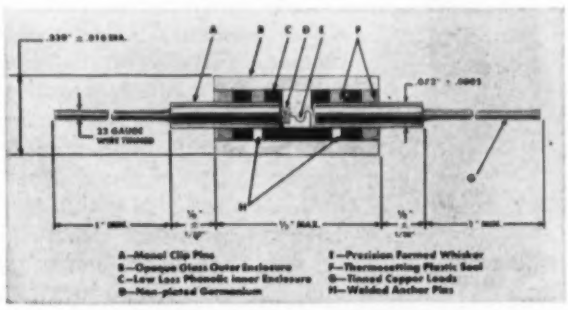
CLOSURE STRIPS for corrugated building materials

Openings caused by installation of corrugated sheet materials against flat surfaces can be sealed by Fabco premolded asphalt or rubber composition closure strips. They are designed to nest with corrugation of galvanized steel, aluminum, protected metal and asbestos-cement roofing and siding sheets and glass fiber reinforced plastic skylighting. Strips are made for nesting lengthwise with the corrugations or at right or 45-degree angles. They are inert to most acids and alkalies and can withstand temperatures of 175° F. Both materials can be drilled and cut with ordinary tools and can be used to isolate different metals to prevent electrolytic corrosion. Made by **Fabricated Products Co.**, Dept. N, West Newton, Pa.

▲ For more details circle NED-516 D3 on enclosed inquiry slip ▲

GERMANIUM DIODES resist shock and vibration

Germanium diodes consisting of an inner housing of low-loss phenolic material over which an outer housing of glass is assembled are resistant to mois-

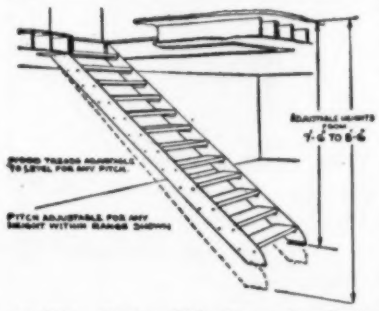


ture, shock and vibration. Design affords electrical isolation from adjacent circuits. Retention of original whisker adjustment is maintained by welded anchor pins. All types are available from **International Rectifier Corp.**, 1523 E. Grand Ave., El Segundo, Calif.

▲ For more details circle NED-517 D3 on enclosed inquiry slip ▲

ADJUSTABLE STAIR UNIT has steel stringers, wooden treads

Permanent adjustable stair unit for commercial and industrial applications provides flexibility in meeting variable heights or pitch-and-run requirements.



Called the Adjust-O-Stair and made with steel stringers and wood treads, it is easily assembled for permanent application once the stairwell is framed and before concrete is poured. Stringers adjust to heights of 7½ ft to 8½ ft and pitch-and-run from 7¾ to 8¾ ft. Wooden stair treads, offered in lengths to 4 ft, are easily leveled and secured by tightening two bolts against each stringer side. Made by **Adjustable Stair Mfg. Co.**, Dept. NE, Box 936, Rockford, Ill.

▲ For more details circle NED-518 D3 on enclosed inquiry slip ▲

THE Sutton MOTOR DRIVEN PRESSURE BLOWER

THREE SIZES ¼, ½, 1 H.P.

USE FOR
- EXHAUSTING
- DUST
- SMOKE
- FUMES
- VAPOR
- FORGE BLASTING

CONVEYING COTTON, WOOL, SHAVINGS
COOLING AND DRYING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY. CENTRIFUGAL TYPE. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6".

Write for LITERATURE AND PRICES

Sutton Manufacturing Corp.
126 WEST WILSON AVE. NORFOLK, VA.

▲ For more details circle NED-519 D3 on enclosed inquiry slip ▲

Case No. 207: Handling sharp edged metal products in hot acid solutions. Correctly job-fitted gloves reduced hand injuries 78% and saved 6c per man-hour on glove replacement cost.

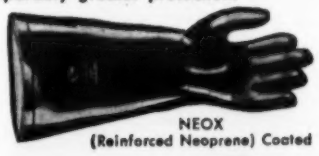
We fit the glove to the job...

Savings of 40% to 70% of glove costs to employees or management, and comparable reductions in hand injuries, are being effected by replacing old-type work gloves with Edmont coated gloves designed for the job condition. With the cooperation of America's largest industries we have developed and test-rated gloves for any combination of service requirements listed below. Tell us your operation. Without cost we will send test samples of the correct glove, and name of distributor who can supply you.

Edmont Case No. 208: Handling explosives in fibre cases. *Job-fitted* gloves, palm-coated with rough textured natural rubber, outwore leather palm gloves 3 to 1 and gave positive non-slip grip at all times.

Edmont Case No. 419: Chemical company working in acids and strong solvents. *Job-fitted* gloves coated with NEOX (specially reinforced neoprene) outwore rubber coated gloves more than 4 to 1.

Edmont Case No. 272: Handling thin strips of stainless steel. *Job-fitted* gloves, palm-coated with cut-resisting reinforced neoprene, wore 8 times longer than canvas gloves (224 hours vs. 28 hours) with comparably greater protection.



NEOX (Reinforced Neoprene) Coated

DUROX (Reinforced Plastic) Coated

Rough-Finish Natural Rubber Coated

Abrasion Resistance
Cutting Resistance
Snagging Resistance
Flexibility
Wet Grip
Dry Grip
Acids:
Sulphuric—98%
Sulphuric—10%
Nitric—70%
Nitric—10%
Hydrochloric—38%
Hydrochloric—10%
Chromic
Solvents:
Turpentine
Stoddard Solvent
White Gasoline
Benzol
Cutting Oil
Acetone
Methyl Ethyl Ketone
Kerosene
Lacquer Thinner
Caustics:
Potassium Hydroxide—50%
Sodium Hydroxide—50%
Lye
Trisodium Phosphate
Degreasants:
Trichlor-ethylene
Carbon-tetrachloride

We make 34 types of coated industrial gloves. Complete catalog on request. Address Edmont Manufacturing Co., 1240 Walnut Street, Coshocton, Ohio.

Edmont

Edmont job-fitted gloves
Largest selling line. Supplied by leading industrial distributors

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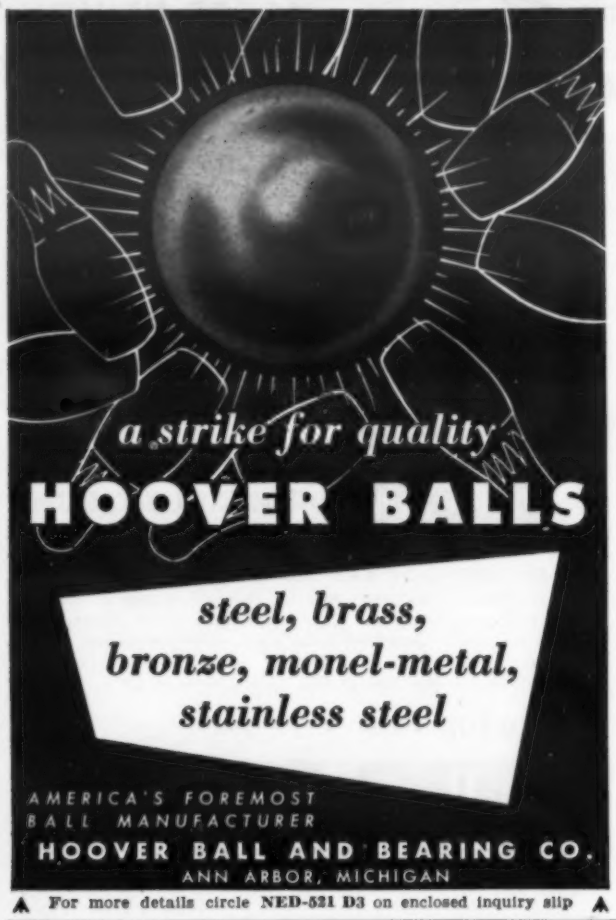

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Designed for Speed • Precision • Compactness

The

AIR CYLINDER

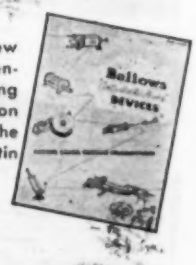
with the *Built-in Valve*

Air engineers agree: the closer the valve to the cylinder, the more efficient is air cylinder operation. In the Bellows Air Motor the valve, and all operating controls, are an integral part of the cylinder itself.

This built-in construction means quicker action, more positive response, surer control, and more economical operation. Built-in construction means compactness, simplified installation, minimum maintenance.

The Bellows Air Motor is made in five bore sizes: 1¼", 1¾", 2½", 3⅝" and 4½", and in any stroke length. You have your choice of a wide range of built-in valve assemblies: low or high voltage electrically controlled operation; standard or explosion proof; momentary air exhaust or maintained air pressure pilot valve operation; or mechanical operation for manual or direct-linked control. Whatever your pneumatic valving requirements there is a Bellows Air Motor with built-in valve to meet your needs. Wide range of mounting styles.

New Bulletin Write for this free new 36-page booklet. Dimensional specifications, technical data, wiring diagrams, case history studies, production and cost data. Address: Dept. NED 453, The Bellows Co., Akron 9, Ohio. Ask for Bulletin CL-50.



The Bellows Co.
AKRON 9, OHIO

"Controlled Air Power"

700A

FOR FASTER, SAFER, BETTER PRODUCTION

▲ For more details circle NED-522 D3 on enclosed inquiry slip ▲

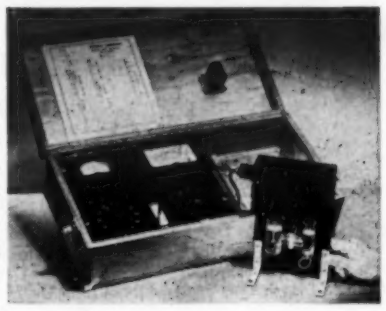
CONVEYOR SWITCH
used with live roller conveyors

Attachment of the illustrated diverting rail at any point of a live roller conveyor permits the switching of conveyed items to a spur installed at any point. Clamp attachments make it easy to move the units to any desired position. Wheel diverting rails can be remotely controlled for diversion at any one of a series of spurs. Made by **Metzgar Co.**, 416 Douglas St. N.W., Grand Rapids 4, Mich.

▲ For more details circle NED-523 D3 on enclosed inquiry slip ▲

DISSOLVED OXYGEN ANALYZER
is portable for use in field work

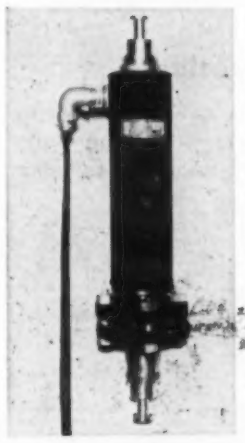
Accurate and rapid oxygen determinations in aqueous solutions are possible with the dissolved oxygen analyzer. This instrument is not subject to interference by dissolved iron, calcium, magnesium or organic matter and, being portable, can be used in the field. Contained in cabinet, it uses standard batteries. Amperometric principle is employed to give determinations in 10 to 30 seconds, correct within 5 per cent for most solutions. Made by **Dorber Co.**, 7741A W. Palatine Ave., Chicago 31, Ill.



▲ For more details circle NED-524 D3 on enclosed inquiry slip ▲

LIQUID DENSITY INDICATOR
also records or controls density

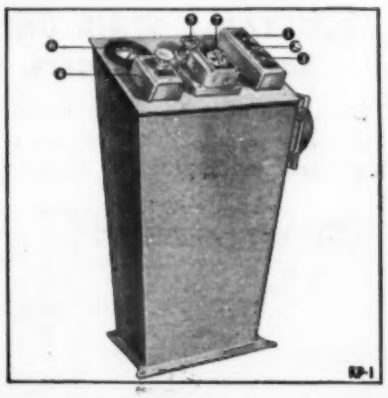
Density of flowing liquids in such processes as blending, mixing, proportioning, diluting or concentrating can be continuously indicated, remotely recorded, and/or controlled by the Princo Densitrol. Density-sensitive element is submerged plummet fastened at fixed reference point. Changes in its position are electrically translated into continuous indication, record or control of liquid density. Full scale range is within 0.5 to 3.5 units for either viscosity or specific gravity. Compensation for liquid temperature changes is provided for. Models are available for operating pressures up to 600 psi. Made by **Precision Thermometer & Instrument Co.**, Dept. 7, 1434 Brandywine St., Philadelphia 30, Pa.



▲ For more details circle NED-525 D3 on enclosed inquiry slip ▲

FRICTION SAW CONTROL STAND
operations pushbutton controlled

All operations and feed adjustments for large Kling friction saws are pushbutton controlled from this improved central control stand. When button is pressed, coolant water is automatically sprayed on saw blade while carriage moves blade toward work. Water shuts off when forward limit switch is struck, after material has been cut. Same switch causes carriage to return to original position. Forward, reverse, stop and momentary-hold buttons are shown in illustration by Nos. 1, 2, 3 and 4, respectively. No. 5 is pressure regulating control, 6 is pressure gage, and 7 is flow control valve. Made by **Kling Bros. Engineering Works**, Dept. NED, 1300 N. Kostner Ave., Chicago 51, Ill.



▲ For more details circle NED-526 D3 on enclosed inquiry slip ▲

Low priced yet . . . it includes PREVENTIVE MAINTENANCE

"F.O.B." (FREE-OF-BURNING) Welded Plate Resistors—in continuous capacity sizes—13 to 150 amperes.

For less preventive-maintenance and lower costs, look to EC&M Welded Plate Resistors. Clamping-nut pressure may loosen under alternate heating and cooling, but the welded construction of EC&M TAB-WELD and TAB-WELD-X Sections stabilizes OHMIC values . . . *stops* burning at grid-eyes and at tap-plates. Also, many taps make on-the-job connections easy and readily permit small adjustments in resistance-value.

Write for NEW Bulletin 942

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

▲ For more details circle NED-527 D3 on enclosed inquiry slip ▲

NEW HELP
FOR USERS OF SMALL PUMPS

This new Tuthill Catalog No. 101 presents the complete line of Model L pumps for lubricating, hydraulic, transfer, circulating and burning oils service. It includes a special Pump Guide on Model L applications, plus specifications and performance data of help to designers, engineers and management. Write for your copy.

TUTHILL PUMP COMPANY
Dependable Pumps since 1927
939 East 95th Street, Chicago 19, Illinois

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FEDERAL PRESSES
28 YEARS OF QUALITY CONSTRUCTION

This Federal #44 has generous, "oversize" dimensions, making it ideal for light, bulky work that small standard presses can't handle. Note its *extra* shut height, *extra* throat depth, *extra* ram and bed areas. Typical Federal workmanship and quality. Available in flywheel or geared models—also in 26-ton size. High speed controls, optional.

Write for new catalog showing complete line. Six to 80-ton capacities.

NO. 44 FLYWHEEL TYPE 35-ton Capacity

THE FEDERAL PRESS COMPANY
506 Division Street, Elkhart, Indiana

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STOP Wasteful Equipment Repairs!

use ANDERSON STRAINERS as preventive maintenance

● If you practice preventive maintenance, you'll want to protect pipeline equipment with Anderson Strainers. These high quality strainers pay for themselves over and over again by protecting equipment against possible damage from pipeline scale, rust and sediment. An important feature of an Anderson Strainer is the stainless steel mesh screen—lasts much longer than bronze screens, normally used in conventional strainers. Low in price. See your distributor.

AHEAD OF...
- PUMPS
- AIR TOOLS
- REDUCING VALVES
- STEAM TRAPS
- TEMPERATURE REGULATORS

FREE! new informative folder on protecting pipeline equipment with Strainers. Write:

THE V. D. ANDERSON CO. 1958 W. 96th St., Cleveland 2, Ohio

For more details circle NED-530 D3 on enclosed inquiry slip

Letters! Reports! Drawings! Invoices! Orders!

The Amazing Desk-Top OZAMATIC

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Johnson City, N. Y.
A Division of General Aniline & Film Corporation.
"From Research to Reality."
Ozalid in Canada—Hughes Owens, Ltd., Montreal.

For more details circle NED-531 D3 on enclosed inquiry slip

PUNCTUREPROOF INNERSOLE
made with layer of sheet steel

Foot injuries from punctures by nails and other sharp-pointed objects underfoot are prevented by Rubberhide safety innersoles for rubber work shoes and boots. Innersole consists of thin, flexible sheet of spring steel bonded to layer of sole leather on upper side and sheet of rubber-impregnated canvas on under side. It is lightweight and formed to fit contours of the foot. Made by **Rubberhide Co.**, 704 Whitehead Rd., Trenton 4, N. J.

For more details circle NED-532 D3 on enclosed inquiry slip

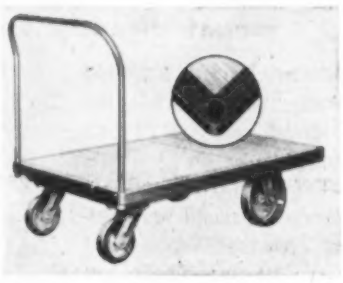
WELDING GOGGLES
ventilating ducts prevent fogging

Each eye cup of the No. 420 welding goggles has eight lightproof ½-in. ventilating ducts to furnish sufficient air circulation to prevent fogging of lens.

Frame is molded plastic, and all edges are rounded for maximum comfort. Covered ball-chain nose bridge permits adjusting to 1/1000-in. for perfect fit on any face. Goggles are lightweight and use standard 50-mm lenses. Second type goggle, model 421, is same style, but features conventional wire screen vents. Made by **Sellstrom Mfg. Co.**, 654 N. Aberdeen St., Chicago 22, Ill.

For more details circle NED-533 D3 on enclosed inquiry slip

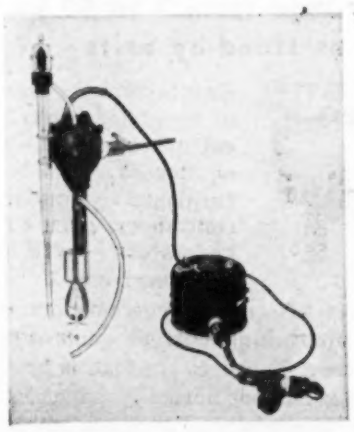
FLOOR TRUCK
made in five widths and five lengths



Made with two arc welded steel frames, rounded steel corners and flush mounted renewable deck sandwiched between the frames, line of model CB heavy duty floor trucks is offered with Clark unbreakable fabricated casters and wheels. Trucks are made in capacities up to 7000 lb, widths of 24, 30, 36, 42 or 48 in. and lengths of 48, 54, 60, 66 or 72 in. Purchaser is given choice of tilt and nontilt types; steel, rubber, composition, oil resistant and static-conductive wheels in all sizes; and Hyatt straight roller bearings, ball bearings and tapered roller bearings, with seals if desired. Made by **All Steel Welded Truck Co.**, 1150 Railroad Ave., Rockford, Ill.

For more details circle NED-534 D3 on enclosed inquiry slip

CONSTANT TEMPERATURE CIRCULATOR
0.01° C constancy in baths achieved

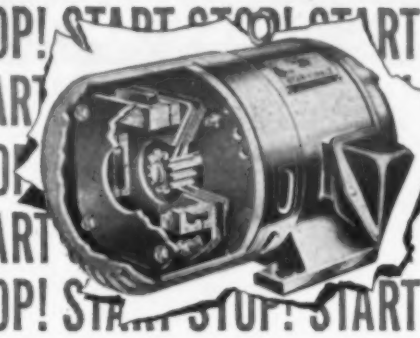


A stirrer with speed adjustment, 700-w heater, temperature control with electronic relay and an accurate thermometer are incorporated in single unit constant temperature circulator. Unit attaches by pivoted extension rod to any support rod by means of clamp holder, adjusts to any position and, when inserted in any glass or metal container, provides portable water or oil bath adjustable from room temperature to 100° C. A constancy of plus or minus 0.01° C can be achieved in insulated baths. Unit can also be used to circulate liquid of controlled temperature through refractometers, polarimeters, spectro-photometers and viscosimeters. At bath level it circulates up to 3 gal of tempered liquid per minute. With water, it has discharge head of 6 ft. Made by **Bronwill Scientific, Inc.**, Dept. N, 40 Worth St., New York 13, N. Y.

For more details circle NED-535 D3 on enclosed inquiry slip

Positive, SPLIT-SECOND stopping

STOP! START STOP! START STOP! START STOP! START STOP! START STOP! START STOP! START STOP!



with Star-Kimble Brakemotors

Note the extra-large brakelining area on a Star-Kimble Brakemotor. It brings motor and load to the same sure fraction-of-a-second stop through *millions of operations*. Smooth no-drag starting, too, and fast reversals without the heat and strains resulting from plugging.

A Star-Kimble Brakemotor is a compact, integral unit. One manufacturer—one responsibility.

For information on design and service features, write for Bulletin B-501-A

STAR-KIMBLE
MOTOR DIVISION OF
MIEHLE PRINTING PRESS AND MFG. CO.
214 Bloomfield Avenue, Bloomfield, New Jersey

For more details circle NED-536 D3 on enclosed inquiry slip

Performance Records Prove

20-50% INCREASED LIFE!

Performance records in hundreds of installations show that *Texrope* grommet belts last 20-50% longer than ordinary belts. The more severe the service—the bigger the difference in belt life. Here are two big reasons:

1—Laboratory tests show grommet belts stretch only 1/3 as much as ordinary belts. Stretch leads to whipping and snub breaks.

2—Pull apart tests show grommet belts have greater pulling strength than ordinary belts. The cord section of a grommet belt is made by twisting the individual cords into a continuous rope, thereby increasing belt strength.

Try *Texrope* grommet belts and see the difference! Call your nearest Allis-Chalmers distributor or District Office, or write Allis-Chalmers, Milwaukee 1, Wis.

A-3992

Texrope is an Allis-Chalmers trademark.

ALLIS-CHALMERS

For more details circle NED-537 D3 on enclosed inquiry slip

Here's HAND TRUCK News!

GUARANTEE

If this AMERICAN HAND TRUCK fails in service for any reason (normal wear on rubber tread wheels excluded) —within five years from date of delivery—return it freight prepaid for repair or replacement to THE AMERICAN PULLEY COMPANY 4200 Wissahickon Ave., Philadelphia 29, Pa.

SAVE THIS CARD—IT'S YOUR GUARANTEE

AMERICAN HAND TRUCK HEADQUARTERS

EFFICIENT MATERIALS HANDLING AT LOWEST COST

ONLY AMERICAN GIVES YOU THIS GUARANTEE

Clip and Mail Coupon For Bulletin

Materials Handling by

AMERICAN PULLEY COMPANY

Complete line of Pressed-Steel Hand Trucks, Barrel Cradles, and Steelite Industrial Wheels.

The American Pulley Company
4294 Wissahickon Ave., Philadelphia 29, Pa.
Gentlemen:
Please send me your latest bulletin on American Hand Trucks.
Name____
Firm Name____
Address____
City____ Zone____ State____

For more details circle NED-538 D3 on enclosed inquiry slip

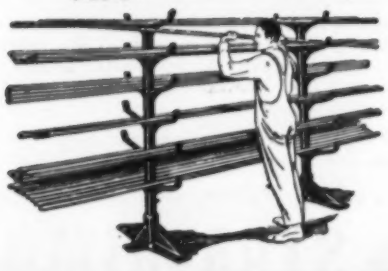
FLEXIBLE STORAGE FAST SELECTION

Time lost end hauling each bar from the old style, closed side rack is readily saved with Brown Time-Saving Racks which require only inches of side movement. Each length, width, and thickness of stock is displayed in "goldfish" visibility for quick selection. Waiting workmen are served promptly. Additional storage capacity can be added at any time by ordering one or more of the interchangeable units.

Respacing the units is easy, since standard racks need not be anchored or braced unless crane loaded. This storage flexibility can be further extended by adding or subtracting arm-holding sections.

Brown Racks are simple, durable, made of metal in five standard models. They can't burn, sag, or twist. Depreciation is practically nil. Lined up in soldierly rows, they make a neat orderly appearance, which not only builds employee enthusiasm, but generates a more respectful attitude toward economies in general. SEND FOR BULLETIN NO. 26D

BROWN'S *QUICK-SERVE* RACKS



BROWN ENGINEERING CO.
129 NORTH 3RD ST. READING, PENNA.

▲ For more details circle NED-539 D3 on enclosed inquiry slip ▲

NEW...FREE BOOKLET!

FOR POWER TRANSMISSION AND DESIGN ENGINEERS

Full of case histories showing how Warner Electric Clutches and Clutch-Couplings revolutionize machine operation and control! For original equipment or modernization of old equipment . . . there's no easier way to speed operation, synchronize motions, reduce maintenance, simplify automatic cycling. . . . Write for Catalog 6089!

WARNER

WARNER ELECTRIC BRAKE & CLUTCH CO.
BELOIT, WISCONSIN

▲ For more details circle NED-540 D3 on enclosed inquiry slip ▲

H_2O anyone?

● If you need or use between 200 and 100,000 gallons per minute of clean water, find out how Cuno's FLO-KLEAN filters can save you money. In hundreds of applications throughout industry, the fully automatic, continuously self-cleaning FLO-KLEANS have paid for themselves many times over by making raw river, lake, or well water fit for industrial use—and reclaiming process water. Write for the free FLO-KLEAN bulletin. The Cuno Engineering Corporation, Dept. 702F Meriden, Connecticut.

8.2

▲ For more details circle NED-541 D3 on enclosed inquiry slip ▲

HANGING SCALE
for pilot, test and estimating work

Having 13¼-in. dial calibrated to 10 lb in increments of 1 oz and maximum capacity of 30 lb, model 2110 hanging scale is designed for multiple purpose use for weighing, pilot weighing of parts or products, testing and estimating. Dials are both front and back, and air cylinder brings indicator to rest quickly. Scale can be suspended from any overhead support and has swivel type hanger. Either porcelain enamel or stainless steel pan is supplied. Made by **Toledo Scale Co.**, Telegraph Rd., Toledo 1, O.

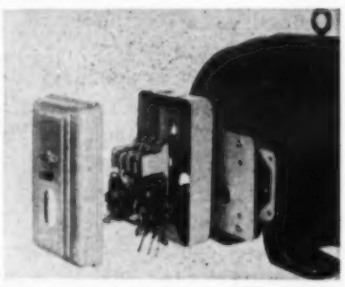
▲ For more details circle NED-542 D3 on enclosed inquiry slip ▲

PRESSURE-SENSITIVE LABELS
includes transparent plastic window

Labeling or identifying of shelves; map, plan or blueprint compartments; parts, tool and storage bins; as well as backs of books, ledgers and binders is accomplished readily with self-adhesive Bind-X insert type label holder. It consists of a transparent plastic window, 1 to ½-in. wide, backed by reinforced fabric coated with pressure-sensitive adhesive. It is offered in 6-in. lengths and can be cut to desired length. Typewritten or hand lettered cards, in coded colors if desired, are easily inserted in holders and can be changed at will. Holders also are available in eight different colors, including clear. Made by **Cel-U-Dex Corp.**, 3 Main St., Brooklyn 1, N. Y.

▲ For more details circle NED-543 D3 on enclosed inquiry slip ▲

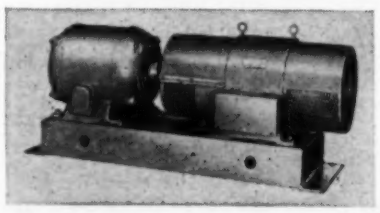
STARTERS & CONTACTORS
mount directly on motors



Motor Mount starters and contactors, designed for direct mounting on motors, can be positioned on motors placed vertically, horizontally or at any angle. They are available in YC, YD and YE sizes up to 10 hp starters and reversing starters. Starter case design and use of two types of adapters for attachment to the motor make mounting in any position possible. Starters and contactors operate satisfactorily at 45-degree angles. When angle exceeds 45 degrees, plate and starter are rotated on the outlet pad face to provide proper operating position for the starter. Made by **Furnas Electric Co.**, 1009 McKee St., Batavia, Ill.

▲ For more details circle NED-544 D3 on enclosed inquiry slip ▲

MOTOR-GENERATOR SETS
have output range from 1 to 50 kw and also act as stand-by units



Uninterrupted flow of regulated electrical power to vital equipment can be furnished by line of continuous power generators with outputs from 1 to 50 kw. Units consist of alternating current motor direct-connected to an alternating current generator and a direct current motor. Power to the load is provided at all times by the generator normally driven by the alternating current motor which receives power from utility lines.

When utility power fails, the already rotating direct current motor is automatically switched to a stand-by battery bank, normally maintained by the direct current motor acting as a generator. Gasoline engine driven generator can be utilized to furnish power to the alternating current motor over extended periods. Made by **Bogue Electric Mfg. Co.**, Bogue Railway Equipment Div., Dept. CP, 52 Iowa Ave., Paterson 3, N. J.

▲ For more details circle NED-545 D3 on enclosed inquiry slip ▲

just SAW that's all!

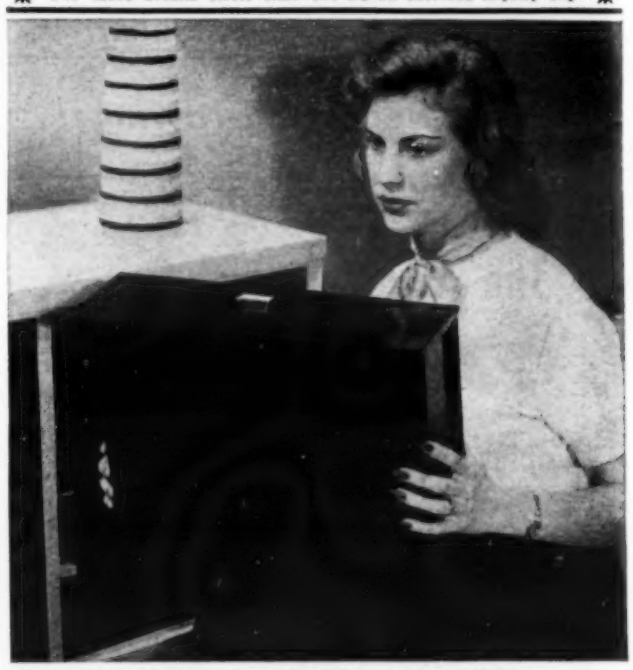
WITH THE **KETT** PANEL CUTTING SAW

• SAVE TIME---SAVE MONEY
• NO DRILLING---NO FILING---NO DEBURRING

Just "plunge" right in and cut . . . everything from cardboard to steel. Follow curves or contours . . . zip through the toughest cutting jobs quicker and easier. Typical capacities: 12 ga. steel, 3/16 in. aluminum, ¼ in. masonite, plywood, Amor Ply, and plastics. Interchangeable heads permit capacities up to ½ in. in soft rigid materials. A variety of blades for hard tempered or soft aluminum, copper, brass, lead, cast iron, etc., are available. Your present electric or pneumatic drill motor may be used for the power unit. Write for Catalog E-16 showing time-saving KETT tools.

The KETT TOOL COMPANY
5 East Third St., Cincinnati 2, Ohio

▲ For more details circle NED-546 D3 on enclosed inquiry slip ▲



Keynoter Series furniture designed by Edmond J. Spence for the Warren Furniture Manufacturing Co., Paterson, N. J.

ONE-PIECE MOLDED PLASTIC DRAWER KEYNOTES NEWEST FURNITURE DESIGN

Designers of contemporary furniture are looking to contemporary materials to express their ideas. Latest proof of their success is this one-piece drawer molded of BAKELITE Phenolic Plastics.

It has several advantages over conventional drawers—in design, manufacture, and use. With its rounded corners and absence of seams, it's easier to clean. Precisely molded, smooth, light in weight, it fits perfectly in place, slides open quietly and effortlessly. It withstands moisture and heat—won't swell, crack, or warp in normal use. Fast mass-production keeps its cost low.

The drawer illustrated is a rich ebony black that harmonizes with the modern woods—ash-blond korina, limed oak, dark mahogany. It could also be molded in other colors, such as red, brown, and simulated wood effects. The soft satin finish is acquired in the molding operation. The drawer can also be faced with wood or other materials.

BAKELITE Phenolic Plastics have properties that inspire fresh, new designs. They are readily applied to the production of large-size moldings, of which cabinets for air conditioning units and television sets are typical. You, too, can profit through the use of these materials. BAKELITE engineers can help you. Write Dept. PH-53.

BAKELITE
TRADE-MARK
PHENOLIC PLASTICS

TRADE MARK

BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation
UCC
30 East 42nd St., New York 17, N. Y.

▲ For more details circle NED-547 D3 on enclosed inquiry slip ▲

For more details circle NED-548 D3 on enclosed inquiry slip

SHENANGO Centrifugal CASTINGS ... KEY TO SAVINGS

It pays to know the facts
SEND FOR THIS BULLETIN

use
SHENANGO
BAR STOCK
for superior quality parts!

SHENANGO Meehanite Metal bars have exceptionally fine grain, higher tensile strength, finer, more uniform graphite dispersion. So naturally you can count on superior wear-life, and less chance of breakage or distortion in service.

Learn more about the money-saving qualities that make Shenango solid and tubular bar stock a preferred material for bearings, bushings, pump parts, liners, sleeves, gears, dies, gauges, and many other common and special parts. Send for the new Shenango Bar Stock Bulletin No. 152, containing additional information and a list of standard, conveniently stocked sizes.

SHENANGO-PENN MOLD COMPANY
Centrifugal Castings Division
Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO
ALL RED BRONZES • MANGANESE BRONZES • ALUMINUM BRONZES • MONEL METAL • NI-RESIST • MEEHANITE METAL

For more details circle NED-549 D3 on enclosed inquiry slip

WHY YOU NEED GOOD VOLTAGE

Equipment	10% Undervoltage	10% Overvoltage
Incandescent lamp bulbs	Cuts light output 30% —slows production	Cuts life 70%— triples costs
A-C motors	Overheat—ups maintenance costs	Lowers power factor —ups power costs
Resistance heaters	Cuts heat output 19% —slows production	Overheats—ups replacement costs
Electronic devices	Probably destroy gas-filled tubes	Only 5% over cuts tube life 50%
Infrared processes	Ups process time —slows production	Blisters, scorches— ups production cost

You can get good voltage and eliminate the harmful effects of undervoltage and overvoltage by installing G-E Inductrols. These dry-type regulators *automatically* maintain correct voltage and assure peak operating efficiency.

Standard automatic regulators range from 3 kva, 120 volts to 500 kva, 600 volts. For more information, see your local G-E sales representative. Or write for bulletins GEA-5824 and GEC-795. *General Electric Company, Schenectady, New York.* 423-200

GENERAL ELECTRIC

For more details circle NED-550 D3 on enclosed inquiry slip

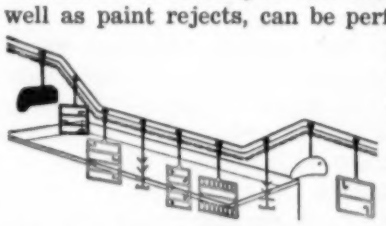
HIGH SPEED SEQUENCE CAMERA
70-mm unit takes 2½ or 5-in. frames

Capable of taking pictures on 70-mm film at rates up to twenty-five 5-in. frames per sec or fifty 2½-in. frames per second, this high speed camera has double disk focal plane shutter for extremely high motion arresting. Large frame sizes facilitate the use of long focal length optics. Camera is equipped with reflex focusing, variable frame control, electric braking and simple frame changing mechanism. It uses standard 70-mm perforated film in 100-ft daylight loading spools and is adaptable for wide range of research and development work. Made by **Charles A. Hulcher Co.**, Dept. NED, 40 Manteo Ave., Hampton, Va.

For more details circle NED-551 D3 on enclosed inquiry slip

PAINT STRIPPING
for conveyor line handling equipment

Method of stripping paint from conveyor hooks, hangers and other conveyor line handling equipment, as well as paint rejects, can be performed by chemicals as part of a production conveyor line operation. Conveyor line accessories are run through a tank of one-step stripper at a given point. Prior to reaching this point, paint rejects can be placed on the line for stripping with the equipment. High speed stripper can be applied by production spray methods if desired. Made by **Klem Chemicals, Inc.**, 14417 Lanson Ave., Dearborn, Mich.



For more details circle NED-552 D3 on enclosed inquiry slip

PILOT CONTROLLED VALVE
for corrosive liquids and gases has absolutely tight shut-off

Compact in design, this pilot operated valve with Saunder's type valve body is intended for use in handling highly corrosive liquids and gases and food products, particularly those containing solid particles. An absolutely tight shut-off is provided. Flexible diaphragm and solenoid core are the only two moving parts. Valve bodies are cast iron, bronze or stainless steel, with a sanitary body and rubber or glass linings available for handling food products. Pipe sizes range from ½ to 2 in. and standard operating currents are 115-230-v ac, 50-60 cycles and 115-v dc. Maximum temperature is 180° F and maximum pressure is 125 psi. Various special enclosures and a class H high temperature coil are available for maximum pressure of 150 psi. Made by **Automatic Switch Co.**, 379-D Lakeside Ave., Orange, N. J.

For more details circle NED-553 D3 on enclosed inquiry slip

GROMMET INSERTER
improved claw grips grommet better

Improved claw or gripper on this grommet inserter features special flanges which hold grommets more securely and keep them from dropping out when tool is used by fast worker. Insertion of grommets is speeded up as much as 25 times faster than ordinary hand insertion methods. Steel claws are hardened to withstand wear. Wooden, instead of plastic handles, have comfortable grip. Made by **D. B. Rich Mfg. Co.**, 6217 N. Melvina Ave., Chicago 30, Ill.

For more details circle NED-554 D3 on enclosed inquiry slip

Generalift ★★★★★
PALLET BOXES
cut materials handling costs
50%
WRITE US FOR DETAILS

Send for your Free Copy of "THE GENERAL BOX"
General ★★★★★ BOX COMPANY
GENERAL OFFICES: 1859 MINER STREET DES PLAINES, ILLINOIS
DISTRICT OFFICES AND FACTORIES: Cincinnati, Denville, N. J., Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, Sheboygan, Winchendon. General Box Company of Mississippi, Meridian, Miss. Continental Box Company, Inc., Houston, Dallas

For more details circle NED-555 D3 on enclosed inquiry slip

Custom STYLE AND QUALITY AT Standard COST

STANDARD CONTROL KNOBS

Choose control knobs for your finest electrical or electronic equipment from this complete family of sizes and functional types. You get integrated design and distinctive styling . . . without the high cost of custom tooling. Made of tough, durable, "Tenite II" (cellulose acetate butyrate), injection molded with anodized aluminum inserts and dual setscrews. Black knobs available with high gloss "mirror" finish for commercial applications or non-reflecting "matte" finish for government equipments. Manufacturers interested in colored knobs are invited to submit their requirements for quotation.

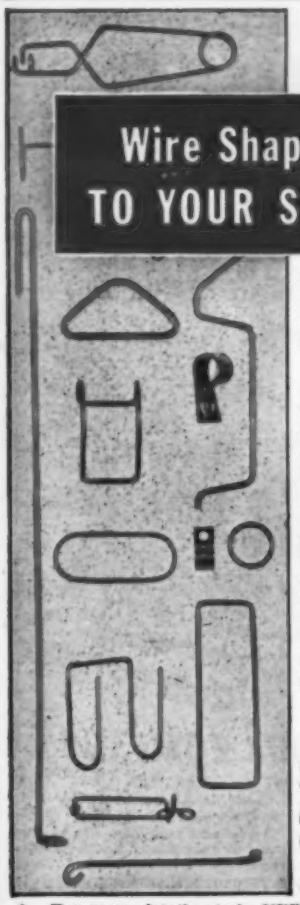
ALL IN MATTE OR MIRROR FINISH

Write for Complete Information
RAYTHEON
Address Dept. 6270 KNE

Excellence in Electronics
RAYTHEON MANUFACTURING COMPANY
EQUIPMENT SALES DIVISION • WALTHAM 54, MASS.

DISTRICT OFFICES: BOSTON, NEW YORK, CLEVELAND, CHICAGO, NEW ORLEANS, LOS ANGELES (WILMINGTON), SAN FRANCISCO, SEATTLE
INTERNATIONAL DIVISION 19 RECTOR STREET, N. Y. C.

For more details circle NED-556 D3 on enclosed inquiry slip



Wire Shapes and Forms TO YOUR SPECIFICATIONS

● Your wire forms are produced fast, accurately and at low cost with Sommer mass-production methods.

Speedy, automatic plating equipment handles either large or small assemblies. Popular new Zinc Iridite process adds a bright, durable, economical finish.

Sommer offers complete forming, stamping, cut-threading and butt-welding services. Let us work with you in designing and producing any wire shapes or forms needed for your defense contracts. Send sample, blueprint or drawing—see how Sommer can save you time and money.

SOMMER METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▲ For more details circle NED-557 D3 on enclosed inquiry slip ▲

NOW...
Let the New Norton
G BOND
add the "TOUCH OF GOLD" to Your Grinding

After five years of development and field-testing, the Norton New G Bond — the most efficient vitrified bond ever produced — is ready!

Secret of its great superiority is the way it holds each abrasive grain just long enough for maximum cutting action — then lets go, to assure a constant grinding surface of new grains with fresh, sharp cutting edges.

As a result, Norton ALUNDUM* grinding wheels made with the new G Bond cut freer, cooler, faster . . . hold corners better . . . are better for form grinding . . . dress easier (ideal for crush dressing) . . . assure a smoother finish . . . cover a wider job range . . . and do more work per wheel.

ARRANGE WITH YOUR NORTON DISTRIBUTOR to try out one of the new Norton G Bond wheels. Ask him about the advantages that you can *see, hear,* and *prove* — and about how the new "Touch of Gold" means bigger grinding profits for *you.* Or write to NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Mass.

NORTON ABRASIVES

Making better products to make other products better

W-1473 *Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries

▲ For more details circle NED-558 D3 on enclosed inquiry slip ▲

HAND OILERS
with controlled oil flow

E-Z oiler model 500 has a 6-oz capacity and is equipped with a removable holder and detachable 6-in. rigid steel spout. An interchangeable 12-in. flexible steel spout for hard-to-reach places is available. Both spouts have steel tips for long wear. Oiler features controlled oil flow and seamless bottom and is easily dismantled and cleaned. This model has plated finish, while economy model 505 has replaceable spout only and copper finish. Made by **K-P Mfg. Co.,** Dept. NED, 1218 Linden Ave., Minneapolis 3, Minn.

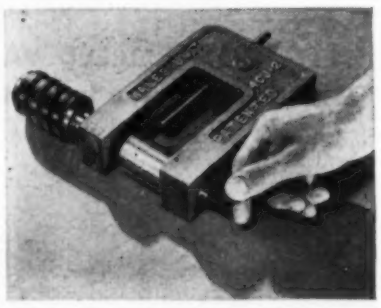
▲ For more details circle NED-559 D3 on enclosed inquiry slip ▲

ELECTRIC STEAM GENERATOR
built to ASME specifications

An electric steam generator, the Hotshot Tandem, is so designed that it meets widely varying steam requirements. Unit is actually an integrated combination of miniature electric boilers, built to ASME specifications. Each component is a separate generator that can be made to operate independently by turning an electric switch. With all components operating at one time, it can be built up to 10 boiler hp and in a short time can be stepped down to as low as ⅓-hp. Tandems will be available with maximum ratings below 10 boiler hp and all will have the step-down feature. Made by **Automatic Steam Products Corp.,** Dept. H, 140 W. 31st St., New York 1, N. Y.

▲ For more details circle NED-560 D3 on enclosed inquiry slip ▲

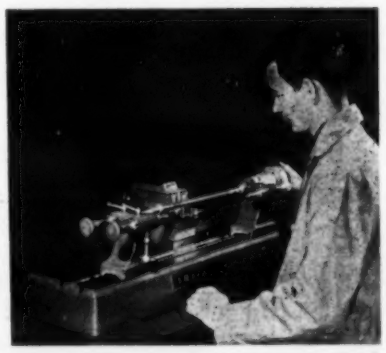
HOLE PUNCHING UNITS
with positive die retainer



Design features of Wales type CJ hole punching units include a positive die retainer and interchangeable die removal method. This arrangement permits interchangeable dies to slip-fit in the holders and to be fastened in position by a threaded pilot pin. Punching unit consists of a holder that carries the punch, die and stripping mechanism. The self-contained design eliminates the necessity of attaching punch to press ram and assures permanent alignment of punch and die. Set-ups are made on T-slotted plates or templates for stamping presses and on T-slotted plates, rails or strip templates in press brakes. Type CJ units are available in three holder widths with maximum punch diameter of ¾-in. for use with metals up to ¼-in. thick. Made by **Wales-Strippit Corp.,** 363 Payne Ave., North Tonawanda, N. Y.

▲ For more details circle NED-561 D3 on enclosed inquiry slip ▲

LEAD MEASURING INSTRUMENT
checks thread to 8-in. diameters



Leads of internal and external threads of work parts up to 8-in. diameters and 18-in. lengths are determined accurately with this Universal lead measuring instrument. Base supports a fixed head stock and tail stock. Head stock incorporates what is virtually a micrometer barrel. Tail stock can be used on either of two runways for various diameters and can be locked in any position. Longitudinal carriage operates on ball bearings on hardened and ground ways. Amplifying and indicating unit has 400 to 1 magnification. Stylus holder can be rotated to suit various setups, and spring loaded device permits suitable pressure between the stylus and work. Attachment is available for checking tapers up to 1 in 4 on the diameter. Made by **Sheffield Corp.,** 721 Springfield St., Dayton 1, O.

▲ For more details circle NED-562 D3 on enclosed inquiry slip ▲

SLY "ECONOMY" DUST FILTERS
Small, Compact, Inexpensive

The Sly ECONOMY Dust Filter is especially suited for collecting the dust from individual machines or from a small group of dust points in close proximity to each other. It is compact yet it has an abundance of filter cloth which helps to maintain a uniform suction.

This filter offers: (1) *High Efficiency* with complete dust collection; (2) *Low Power,* a 3 HP motor will handle 1400 cu. ft. per minute; (3) *Long Life* because a very liberal amount of filter cloth is used; (4) *Compactness* because the filter cloth occupies a minimum of space; (5) *Effective Bag Cleaning* by means of a simple shaking device.

Made in four standard sizes, to filter dust out of 300 to 1400 cu. ft. air per minute. Write **The W. W. Sly Manufacturing Co.,** 4748 Train Avenue, Cleveland 2, Ohio. There are experienced Sly engineers in New York, Chicago, Philadelphia, Syracuse, Detroit, Buffalo, Cincinnati, St. Louis, Minneapolis, Birmingham, Los Angeles, Toronto. Advt.

▲ For more details circle NED-563 D3 on enclosed inquiry slip ▲

Moving or Storing is Rapid, Convenient and Inexpensive with

IRONBOUND SEMI-LIVE SKID PLATFORMS

Ruggedly built with capacities up to 2500 lbs. These units are quickly made mobile with the use of low cost lift jacks . . . One of the methods that Ironbound engineers use to increase production and conserve space at low cost.

SEMI-LIVE SKID WITH BOX TOP

. . . permanently attached or removable. Also available with many other superstructures to "Short-Haul" your products thru production or into storage. Useful in hundreds of spots in every plant.

THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

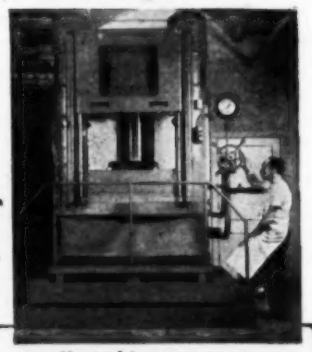
▲ For more details circle NED-564 D3 on enclosed inquiry slip ▲

Important addition
To SUMMIT-ROBERTS TOOL CO.
... a 2500 ton hobbing press

For over 20 years we have hobbed cavities in only the highest quality hobbing steel. Now, by industry demand we offer our services to cold hobb your cavities for

MOLDS for Plastics
Die casting Dies

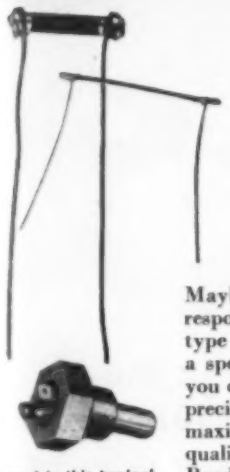
We can make the hobbs or use yours.



Visit our plant personally and inspect our modern facilities, where you will see one of the most unusual, outstanding and fully equipped shops in the country.

Summit-Roberts Tool Co.
830 NEW YORK AVE. • TOLEDO, OHIO

▲ For more details circle NED-565 D3 on enclosed inquiry slip ▲



Used in this typical application for sensing temperature of hydraulic oil.

precision-made to your needs . . . BENDIX-FRIEZ thermistors

Maybe your need for these temperature responsive resistors can be satisfied by a type we carry in stock. Maybe you require a specially-developed type. In either case, you can depend on Bendix-Friez to provide precision-made thermistors to serve you with maximum efficiency. High standards of quality control in manufacture make Bendix-Friez Thermistors pre-eminent in their field—assure you of utmost satisfaction.

STANDARD TYPES FOR IMMEDIATE DELIVERY

Size (inches)	@ +30°C.	@ 0°C.	@ −30°C.
.140 x .75	45.0 ohms	86 ohms	194 ohms
.040 x 1.5	12,250 ohms	26,200 ohms	65,340 ohms
.018 x 1.5	35,000 ohms	82,290 ohms	229,600 ohms

Write for details.

FRIEZ INSTRUMENT DIVISION of Bendix Aviation Corporation

1444 Taylor Avenue, BALTIMORE 4, MARYLAND

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

For more details circle NED-566 D3 on enclosed inquiry slip

Protects AIR TOOLS AND EQUIPMENT

against rust, scale and condensation in the air line ...provides constant lubrication

The Keller Lubricator-Filter operates automatically when air tools or equipment are in operation. Filter removes moisture as well as solids—easily cleaned by opening drain cock at bottom. Oil feeds from the lubricator through an upright wick—no flooding or waste when tools are not in use.

Transparent bowls show when filter needs draining, or when light spindle oil should be added to lubricator. Write for descriptive Bulletin #65-5.

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company

GRAND HAVEN, MICHIGAN

For more details circle NED-567 D3 on enclosed inquiry slip

Sort Out Your Sizes MECHANICALLY and ACCURATELY

MIGHTY-MITE

LIGHT DUTY VIBRATING SCREENS

ACCURATE—EFFICIENT—SAVES TIME

Now, you can screen, size, sort out or reclaim fine or coarse materials up to 15 tons per hour with Mighty-Mite. Hundreds in use. Send for literature today.

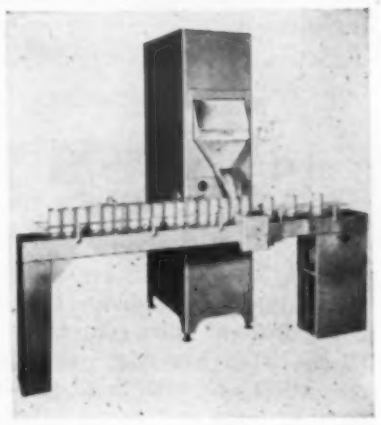
SCREEN EQUIPMENT CO., INC.

1750 WALDEN AVE., BUFFALO 25, NEW YORK

In Canada, United Steel Corp. Ltd., Toronto, Ont.

For more details circle NED-568 D3 on enclosed inquiry slip

WEIGH TYPE PACKER fills all types of containers



Fully enclosed, this Whiz-Packer net weighing machine provides for quick changeover for broad range of products and weights. It is semi-automatic unit for filling containers of all types including bags and is fully automatic for filling all types of flat bottom containers. It is complete filling-conveying unit and will handle jars, cartons and cans of any size and shape. Conveyor elements are electrically synchronized with weighing machine. Made by **Frazier & Son,** 20 Industrial West, Allwood, Clifton, N. J.

For more details circle NED-569 D3 on enclosed inquiry slip

MULTIPLE HOLE PUNCHING process developed for stampings

Multiple holes of varying diameters can be punched simultaneously in stampings of any stampable material by a newly developed process. Present blank size dimensions range from 2¾ to 4¾ in.; thicknesses from 0.015 to 0.093-in.; and hole sizes from 1/16 to ½-in. Equipment now being installed will further increase these dimensions. Service offered by **Federal Tool & Mfg. Co.,** Dept. NED, 3640 Alabama Ave., Minneapolis 16, Minn.

For more details circle NED-570 D3 on enclosed inquiry slip

SAFETY SIGNS of fabric have self-adhesive backing

Capable of sticking permanently to any smooth clean surface, industrial safety signs are imprinted on heavy fabric with self-adhesive backing. They can be removed without damage to sign or mounting area when need is temporary. Offered in 2¼ x 9-in. and 2¼ x 4½-in. sizes, signs are available in three color combinations. Red letters on white background indicate danger or fire protection. Yellow letters on black background indicate caution. Black letters on a white background are used for information or directions. Over 200 standard wordings are stocked, and special types can be printed to specification. Made by **Western Lithograph Co.,** Westline Products Div., 604 E. Second St., Los Angeles 54, Calif.

For more details circle NED-571 D3 on enclosed inquiry slip

GROUNDING DEVICE three-wire type rated at 250 v

Usable with metallic or nonmetallic wiring systems, line of three-wire grounding devices for back or side wiring is rated at 15 amp, 250 v. Tandem slots in the receptacles fit tandem slots in the caps. Grounding of metallic systems is directly through the metal enclosure, while in nonmetallic systems grounding in through a third wire. U-shaped slots take the grounding blade and assure positive identification of the grounding circuit. Devices have wire strip gage, break-off feature for two-circuit installations and washer type plaster ears. Single and dual outlets for box mounting, single cord connector outlet and five types of caps for three-wire, 15-amp, 250 v service are available. Made by **Harvey Hubbell, Inc.,** Dept. X-1, State & Bostwick Ave., Bridgeport 2, Conn.

For more details circle NED-572 D3 on enclosed inquiry slip

Handle up to 6 loaded cars

Link-Belt Car Spotters release manpower for other jobs. They speed the spotting of railroad cars for loading and unloading . . . reduce switching and demurrage time. One man, using a Link-Belt Car Spotter with motor driven capstan, can easily move up to six loaded cars at a time. Two sizes, with 5 and 10 hp motors develop 5,000 and 10,000 lb. rope pulls.

Get this Book →

Book No. 1992-A gives all the facts about Link-Belt's complete line of car spotters and drum-type pullers.

LINK-BELT CAR SPOTTER

12,823

LINK-BELT COMPANY

Dept. 22, 307 N. Michigan Ave., Chicago 1, Illinois

For more details circle NED-573 D3 on enclosed inquiry slip

NEW SAFETY FOR ALARM CIRCUITS!

An Alarm Silencing Relay *that never forgets*

• Add this Honeywell Alarm Silencing Relay to any alarm circuit that notifies operators of incorrect temperature, liquid level, flame failure or other dangerous condition. Then when the alarm sounds, you can turn off the warning horn or bell with complete safety . . . just by pressing the relay's button.

A red light immediately comes on, and remains on, to remind operators that the faulty condition still exists. When normal conditions return, the red light goes out and the alarm circuit is automatically reset.

The Alarm Silencing Relay will protect your valuable equipment against the dangers arising from human forgetfulness. Get the details today from your nearest Honeywell representative . . . he is as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4529 Wayne Ave., Philadelphia 44, Pa.

• **REFERENCE DATA:** Write for Bulletin 8501, "Alarm Silencing Relay," and for Catalog 8305, "Industrial Controls."

MINNEAPOLIS **Honeywell** BROWN INSTRUMENTS

First in Controls

For more details circle NED-574 D3 on enclosed inquiry slip

REPLACE 29 SIZES WITH THESE TWO

NEW GIANT ALLOY
adjustable wrenches
THINNER-LIGHTER-STRONGER

Until now 29 wrenches have been needed to handle the jobs done by these two new alloy adjustable wrenches. They are THIN—to get at the work easily. Strong—designed for added strength at leverage points. Light—to make job servicing easy. Economical—saves time, tools and materials. Large jobs become simple ones.

Giant alloy wrench No. OA-24 is 24" long, 7/8" thick, weighs only 10 lbs. and adjusts to 13 standard sizes from 1 1/8" to 2 7/8". OA-36 is 35" long, 1 1/8" thick, weighs only 22 lbs. and adjusts to 16 standard sizes from 2 15/16" to 4 1/4".

REPLACE 29 SIZES PATENT APPLIED FOR

ANOTHER EXAMPLE OF ENGINEERING THAT MAKES OTC TOOLS OUTSTANDING

OWATONNA TOOL CO.
436 CEDAR ST., OWATONNA, MINNESOTA

▲ For more details circle NED-575 D3 on enclosed inquiry slip ▲

FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL
TOOL BOXES
CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.

WATERLOO METAL BOXES AND CHESTS

Waterloo
VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

▲ For more details circle NED-576 D3 on enclosed inquiry slip ▲

EASY-FLO No. 3 TRIMETAL

the 3-in-1 alloy for "sandwich" brazing carbide tool tips

■ This new alloy provides the easy, reliable, low-cost way to mount cemented carbides for applications calling for the "sandwich" type braze. The EASY-FLO No. 3 makes the high strength joints for which this low temperature silver brazing alloy is noted, while the copper acts as a shock absorber and heat distributor. The combination assures joints that withstand the severe stresses and high heat of heavy duty cutting. EASY-FLO No. 3 TRIMETAL is available in strip and sheet and in precut shims to fit standard carbide tip sizes. Order from your nearest Handy & Harman distributor. If you can't locate him, write for "Distributor List."

HANDY & HARMAN 82 Fulton St., New York 38, N. Y.
Distributors in Principal Cities. In Canada: Handy & Harman of Canada Ltd., Toronto

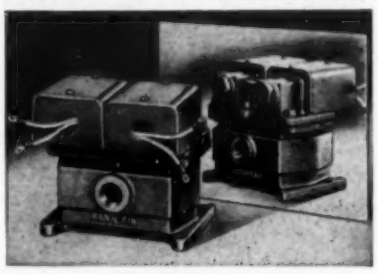
▲ For more details circle NED-577 D3 on enclosed inquiry slip ▲

PLASTIC BINDING KIT
for typed or printed sheets

Plastic binding can be applied to any typed or printed sheet in a few seconds by plastic binding kit which consists of a plastic and cold rolled steel hand punching machine and crack-resistant vinyl plastic binding tubes. Punch makes two holes, 2½ in. from center to center, through about 15 sheets of paper at one time. Tubes, available in red, white and blue in many sizes, enable the bound book to open and remain flat. Kit sells for $11.90. Made by **Tauber Plastics, Inc.**, 200-S Hudson St., New York 13, N. Y.

▲ For more details circle NED-578 D3 on enclosed inquiry slip ▲

AIR CONTROL VALVE
prevents press repeat action caused by control valve failure

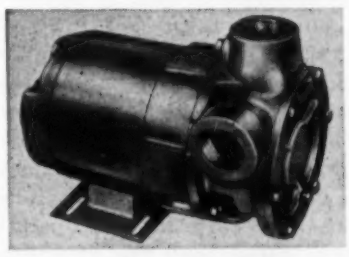


Repeat action due to valve failure on mechanical presses controlled by air-operated clutches and brakes is prevented by the P-M series BB-5 air control valve. Unit consists of two 3-way valves in parallel within one compact body. Both must operate to start press, but if one valve should reverse, unit "fails safe" and press stops. Valve is offered only in ¾-in. pipe size and is capable of speeds in excess of 600 cycles per minute.

The two solenoids are connected in parallel in press circuit, while pilot sections are interlocked pneumatically so that if either solenoid fails to operate, valve will not build up enough pilot pressure to operate either main valve, and press will not start. Solenoids can be disassembled. Coils for 115, 230 or 460 v and for either 25 or 50/60 cycles are available as standard. Direct current solenoids can be obtained. Made by **Hannifin Corp.**, 1128 S. Kilbourn Ave., Chicago 24, Ill.

▲ For more details circle NED-579 D3 on enclosed inquiry slip ▲

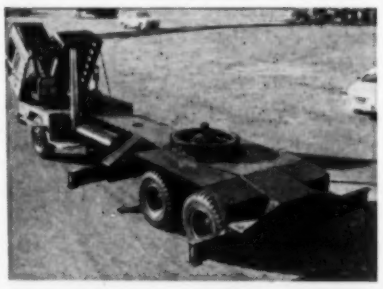
TURBINE TYPE PUMPS
are close-coupled to motor



Available in capacities of 3 to 30 gpm and heads from 0 to 250 ft, Apco V-type close-coupled turbine pumps have mechanical seals and are available with self-priming features. Design assures compactness and permanent alignment. Wear parts are bronze. Pumps will handle vapor entrapped in liquid without losing their prime. Made by **Aurora Pump Co.**, 96 Dearborn St., Aurora, Ill.

▲ For more details circle NED-580 D3 on enclosed inquiry slip ▲

MOBILE CRANE CARRIER
for cranes, shovels, draglines, hoes



Available in capacities of 5 tons and up, Cook Crane Carriers can be used for all makes of cranes, shovels, draglines and trench hoes. Operator's cab and hood are hinged at front for free access to engine for ease of maintenance. Additional cab features are adjustable side and rear windows, ventilators and insulation. Engine hood also tilts. Either gasoline or diesel engines can be provided, with a choice of make and type. Extendable outrigger affords stability. Rigging and tackle box, hydraulically mounted adjustable seat, spring loaded step, pedestal instrument panel, sealed beam lights and welded frame are added features. Made by **Cook Bros. Equipment Co.**, Crane Carrier Div., 1815 N. Broadway, Los Angeles 31, Calif.

▲ For more details circle NED-581 D3 on enclosed inquiry slip ▲

clean

Honan-Crane
HYDRAULIC OIL PURIFI

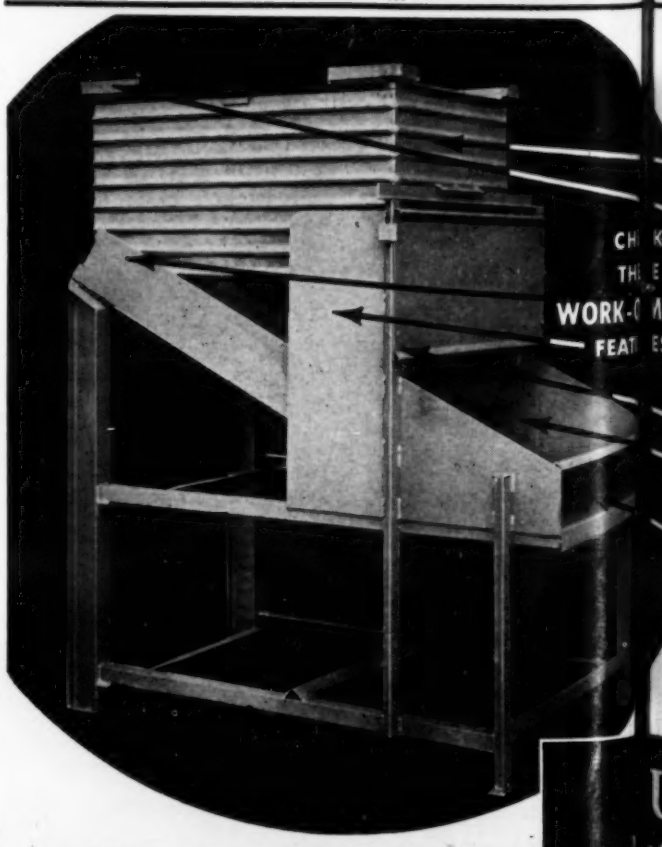
- Removes Solid Abrasive Contamination
- Removes Corrosive Products of Oxidation
- Prevents Sludging
- Keeps Oil CLEAN and SAFE to Use Indefinitely

Sizes for direct connection to individ machines—mobile units for general ser

All Honan-Crane equipment is sold on a performance guaranteed basis

▲ For more details circle NED-582 D3

▲ For more details circle NED-583 D3 on



See this product at BOOTH No. 1106
Materials Handling Exposition, May 18-22, Philadelphia

▲ For more details circle NED-584 D3

HYDRAULIC OIL STOPS

downtime and costly repairs to hydraulic equipment

Get FREE Booklet

"Hydraulic Bulletin" describes profitable use of Honan-Crane Purification in many hydraulic applications. Write for yours!

HONAN-CRANE CORPORATION
405 Wabash Avenue • Lebanon, Indiana
A Subsidiary of
HOUDAILLE-HERSHEY CORP.

WORLD'S LEADING OIL FILTER MANUFACTURER

In Canada: E. W. PLAYFORD, LTD., Montreal 28
W. E. MICKLETHWAITE, Toronto 18

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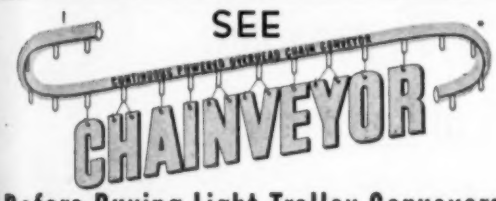
SEE

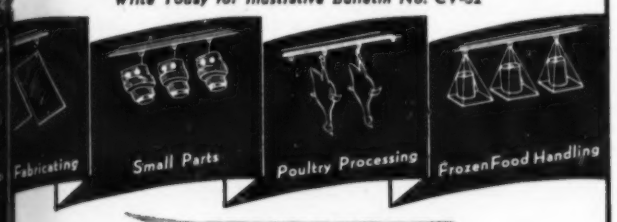


Before Buying Light Trolley Conveyers

Engineered for dependable overhead conveying, the Chainveyor, a light-duty, fully enclosed, continuous chain conveyer is indeed an outstanding performer. Extremely flexible with short radius curves and straight tubular track sections, the Chainveyor is easily installed and adaptable to unusual situations. The Chainveyor is, in fact, completely practical everywhere light overhead conveying equipment is required.

*The Chainveyor is manufactured by United States Spring and Bumper Co. of Los Angeles, Calif., and distributed nationally by Mathews Conveyer Company.

Write Today for Illustrative Bulletin No. CV-52



MATHEWS CONVEYERS

General Offices, Mathews Conveyer Company . Ellwood City, Pennsylvania
Pacific Coast Division, Mathews Conveyer Company West Coast, San Carlos, California
Canadian Division . Mathews Conveyer Company, Ltd., Port Hope, Ontario

circle NED-583 D3 on enclosed inquiry slip ▲

New-type multi-purpose box...

BOOSTS PRODUCTION • CUTS COSTS!

1. **WORK-O-MATIC DROP-BOTTOM BOX.** Exclusive Union Metal square corner box of heavy gauge corrugated steel, with outturned 1" triangular bead flanges at top and bottom.
2. **CORNER STACKING ANGLES.** Permit safe group stacking—one box on another—saving valuable floor space by putting air space to work. Designed to stop end or side shifting.
3. **HINGED CHUTE BOTTOM.** Lowering of operator-controlled truck forks hinges bottom downward, automatically sliding parts into work-level tray.
4. **HEAVY-DUTY WORK-POSITIONING STAND.** Receives box from back or sides. Is safely, easily transported by lift truck from one work station to another when desired.
5. **CONTROL GATE.** Vertical adjustment controls constant flow of different size parts to service the work station.
6. **WORK-LEVEL TRAY.** Feeds parts to work station, eliminating costly, tiring, hazardous stretch-bend-stoop methods. *Reservoir feature* cuts "down time" during interchange of supply boxes.
7. **SLOPING TRAY END.** Assures maximum part accessibility. Easily removed during "job finish-off". Speeds job changes.

These are only a few Work-O-Matic features making as much as 52.8% production gains at thousands of work stations. Get all the facts by writing to The Union Metal Manufacturing Company, Canton 5, Ohio, for Folder MH-809 and T. & M. Studies.

*Patent No. 2,445,038. Other patents pending.

UNION METAL
Materials Handling Equipment

circle NED-584 D3 on enclosed inquiry slip ▲

INDICATING VISCOSITY METER

instrument is panel or wall mounting

Adaptable for uses where permanent recording is not required, this recording Viscosimeter for wall or panel mounting has 6-in. dial. It is also adaptable as an indicator-controller for some automatic control applications. Operating principle involves measurement of time required for a piston to fall a given distance through the solution being measured. Made by **Norcross Corp.**, Dept. N29, 247 Newtonville Ave., Newton 58, Mass.

▲ For more details circle NED-585 D3 on enclosed inquiry slip ▲

MAGNESIUM MELTING CRUCIBLES

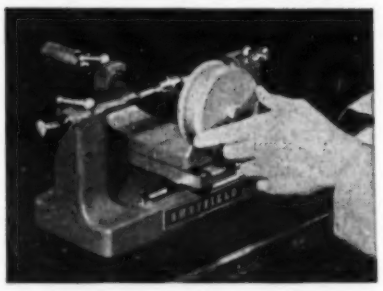
resistant to high heat, distortion

Line of Amera-Mag steel fabricated crucibles for magnesium melting is made from a steel which is resistant to high heats and distortion, yet low in contaminants such as nickel and copper. Crucibles are supplied in 1200 to 6000-lb capacities for primary melting, 60 to 600-lb capacities for super-heating and pouring and in 40 to 850-lb capacities for holding and ladling. They feature extra heavy bottom, proper wall thickness and welded construction in accordance with ASME procedure. Made by **American Tank & Fabricating Co.**, 2280 Scranton Rd., Cleveland 13, O.

▲ For more details circle NED-586 D3 on enclosed inquiry slip ▲

DIAMETER GAGES

check large diameters accurately to tolerances within 0.00001-in.



Available in capacities of 4-in. diameter with 8 in. between centers, 7 in. with 12½ in. between centers and 6 to 12 in. with 14 in. between centers, floating carriage diameter measuring machines check diametral thread elements easily and accurately. Machine consists of cast iron base mounting two accurately aligned and adjustable centers. At right angles to axis of centers is a freely moving measuring carriage mounted on balls in V-ways and carrying a micrometer and highly accurate reference point indicator. This carriage permits measurements to be taken along the center line and at right angles to the work.

Vernier scale on nonglare micrometer drum permits direct readings to 0.00001-in. Nonrotating anvils are fitted to micrometer to minimize wear at point of contact. Reference point mechanical indicators enable thread elements to be measured within 0.00001-in. irrespective of "feel" of micrometer. All measurements are made against a known plain cylindrical standard. Made by **Sheffield Corp.**, 721 Springfield St., Dayton 1, O.

▲ For more details circle NED-587 D3 on enclosed inquiry slip ▲

GROUNDING RECEPTACLE

is combination 3-2 wire dual unit

Designed to accommodate, at either end, both three-wire tangential bladed grounded caps and conventional two-wire caps, No. 326 grounding duplex receptacle is UL approved. Rated 15-amp on 125-v ac, unit is also adaptable for direct current service because of its polarized parallel entrances. Grounding terminal is clearly marked and has green screw for code identification. Other features are ChaneLock terminals, through-wiring design and availability in brown and ivory. Made by **Slater Electric & Mfg. Co.**, Dept. T, 56th St. & 37th Ave., Woodside, L. I., N. Y.

▲ For more details circle NED-588 D3 on enclosed inquiry slip ▲

VERTICAL or HORIZONTAL

THE MOST
COMPACT CONVEYOR
FOR BULK MATERIALS

FORT WORTH Screw Conveyors and vertical Screw Elevators provide the most compact means of conveying or elevating bulk materials, such as grain and other free flowing products. Space occupied is less than half that of most other types of conveyors.

Vertical screw elevators are used to lift materials up to 70 feet, depending on the nature of the product.

Initial cost is low.
A minimum amount of upkeep is required.

WRITE FOR CATALOG 200B

OTHER FORT WORTH PRODUCTS
V-BELT DRIVES
SCREW CONVEYORS and ACCESSORIES
SCREW ELEVATORS
INDUSTRIAL FANS

FORT WORTH STEEL & MACHINERY CO.
Dept. 224, 3600 McCart St., Fort Worth, Texas

▲ For more details circle NED-589 D3 on enclosed inquiry slip ▲

the easy-to-use Soldering Flux for neat, strong unions.

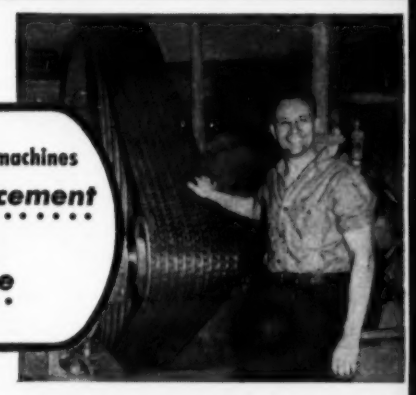
Use Rubyfluid Flux—liquid or paste—to get neat, strong unions speedily and easily. Rubyfluid is a special fast acting formula, wets out freely, is free from harmful and objectionable fumes, economical to use. Try it—send $1 for special offer—1 pt. liquid, ½ lb. paste flux and helpful booklet.

For Stainless Steel use *Ruby's Stainless Steel Flux*, perfected for that metal.

RUBY CHEMICAL CO.
72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

▲ For more details circle NED-590 D3 on enclosed inquiry slip ▲



with Veelos on your machines
v-belt replacement takes up to 90% less time

ACTUAL in-plant records prove that Veelos v-belt can be installed *and operating* in up to 1/10th the time regularly needed to do the same job using endless v-belts.

Matched sets of Veelos are quickly made up in your own stockroom or at the machine by just coupling the correct lengths for the particular drive. Even outboard bearing drives are no problem. You *never* remove these outboard bearings, because Veelos is installed by simply coupling it around the snafts and running it onto the sheaves.

VEELOS THE LINK V-BELT

Write for a copy of the Veelos Data Book. It's fully illustrated and packed with useful engineering data. We'll be glad to send a copy to you.

MANHEIM MANUFACTURING AND BELTING CO.
650 Manbel Street, Manheim, Pa.

Adjustable to Any Length • Adaptable to Any Drive

▲ For more details circle NED-591 D3 on enclosed inquiry slip ▲

Shells, beads, or American dollars—no enterprise is successful unless it shows a profit. Kester quality and performance assure you profitable production results at the lowest possible cost. To put more "wampum" in *your* "wigwam," always insist on Kester Solder!

HAVE YOU written for your free copy of the Kester Technical Manual, "SOLDER and Soldering Technique"? Won't you do it today?

KESTER

SOLDER COMPANY

4249 Wrightwood Avenue • Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

▲ For more details circle **NED-592 D3** on enclosed inquiry slip ▲

THERE IS AN **R-B-M** *CONTROL To Fit Your Needs*

A.C. MAGNETIC STARTERS
with Plasti-Clad Magnet Coil
•
Write for Bulletin 605

Full accessibility in a small package.

Contacts, coil and thermal element replacement with use of screwdriver only. Magnet coil—in molded phenolic case with riveted terminals—is completely embedded in a rock-hard resinous material, thus protecting against oil, dirt, moisture and normal mechanical damage.

HERMETICALLY SEALED RELAYS
•
Write for Bulletin ASR

50% smaller—lighter.

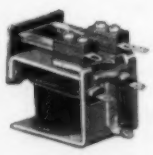
R-B-M 22204-0 meets AN 3304-1 specifications. R-B-M engineers have developed the 22300-0 currently used in government electronic, air-borne and ground equipment—as the electrical and mechanical equivalent of the AN 3304-1, yet 50% smaller in size with ½ the weight.

INDUSTRIAL CONTACTORS
with Plasti-Clad Magnet Coil
•
Write for Bulletin 600

2-8 poles Non-Reversing. 2-5 poles Reversing. 25 Amp—600 AC Max.

Contacts can be replaced without removing wiring. To change coil, remove magnet frame and coil assembly only. 10 and 15 amp. poles can be changed from normally open to normally closed by using screwdriver only.

GENERAL PURPOSE RELAYS
•
Write for Bulletin 570



Low cost. Small size. Dependable performance. Available in many contact arrangements.

Whatever your needs for inexpensive, dependable relays for commercial applications—investigate R-B-M General Purpose Relays.

Other R-B-M products include; motor overload protectors, motor starting relays and low voltage DC electrical devices.

Consult R-B-M on Your Control Problems—Write Dept. K-4

R-B-M DIVISION ESSEX WIRE CORP.
Logansport, Indiana
MANUAL AND MAGNETIC ELECTRIC CONTROLS
—FOR AUTOMOTIVE, INDUSTRIAL, COMMUNICATION AND ELECTRONIC USE

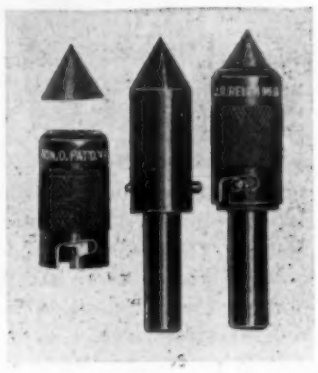
▲ For more details circle **NED-593 D3** on enclosed inquiry slip ▲

FILTER & LUBRICATOR bowls molded of transparent plastic

Bakelite C-11 plastic used in molding these transparent filter and lubricator bowls withstands temperatures up to 125° F and air pressure of 150 psi. Designed to reduce repair and maintenance costs and to prolong pneumatic tool life, the line filter (left) traps dirt, dust and other contamination in the air supply, while the lubricator bowl (right) supplies an oily mist to be carried by the air through working parts of the tool. Filter and lubricator available from **Master Pneumatic Supply Co.**, 20426-34 Sherwood Ave., Detroit 34, Mich.

▲ For more details circle **NED-594 D3** on enclosed inquiry slip ▲

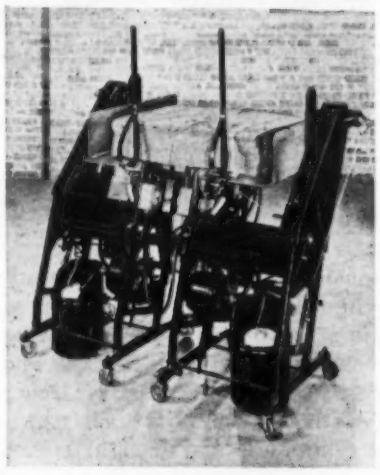
LAPPING CENTER uses abrasive cloth cone



Abrasive cloth cone of Cent-R-Lap tools is quickly changed while the tool remains locked in the chuck. Cones, which fit over the mandrel, are formed with a curved seam which assures accurate lapping without chatter. Accurately machined mandrel has a permanent 60-degree angle. Tools with nonrusting blue-black finishes are offered in ⅜ and ¾-in. sizes and abrasives cones are available in all leading grits. Made by **J. R. Reich Mfg. Co.**, Dept. J, 45 E. Stroop Rd., Dayton 9, O.

▲ For more details circle **NED-595 D3** on enclosed inquiry slip ▲

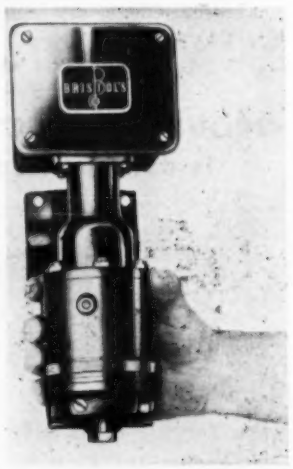
PACKAGE TYING MACHINE ties 15 to 20 bundles per minute



Bundles of stacked corrugated boxes in knocked-down form are double tied automatically by this machine at speeds of 15 to to 20 bundles per minute. Two machines are available for up to 26-in. wide bundles and for 34-in. width bundles. Machine uses 16 or 20-ply soft cotton twine. Spacing between ties can be varied from 18 in. to 6 ft. Made by **B. H. Bunn Co.**, 7604 S. Yale St., Chicago 20, Ill.

▲ For more details circle **NED-596 D3** on enclosed inquiry slip ▲

PNEUMATIC TRANSMITTER sends gage readings to recorders



Readings of temperature, pressure, vacuum, differential pressure and liquid level are transmitted to recording, indicating and controlling receivers by series 650 miniature pneumatic transmitter. Transmission is by means of air pressures of 3 to 15 psi that have direct relation to measured quantity. Unit uses standard Bristol measuring elements and simple transmitting mechanism with only one pivot and no flexures. It is sensitive to measured value changes as little as 0.03 per cent of range, including reversal. Pneumatic relay with output of 3.0 scfm assures high-speed transmission and good control. Weatherproof unit weighs 7½ lb and operates in any location or position. Made by **Bristol Co.**, 30 Bristol Rd., Waterbury 20, Conn.

▲ For more details circle **NED-597 D3** on enclosed inquiry slip ▲

Hoist Away!

Portable pulling power . . . on the spot. Just plug in this powerful STAMPCO TUGGER wherever an electrical outlet is handy. The TUGGER'S high-torque hoisting motor delivers plenty of power to the drum . . . instantly . . . through a series of precision gears running in a continuous bath of oil.

Drum is reversed, *electrically*, at the flick of a finger. Furnished with either mechanical brake and switch control, or magnetic-type electric brake for remote control stations.

If you are "man handling" those back-breaking lifting and pulling jobs in your plant, remember this—ONE MAN—ONE HAND—ONE FINGER—operates the TUGGER. Reduces labor costs and accidents. A self-liquidating investment. *Write for free Catalog Bulletin today!*

ST. ANTHONY MACHINE PRODUCTS CO.
2422 East Franklin Ave. • Minneapolis 6, Minn.

▲ For more details circle **NED-598 D3** on enclosed inquiry slip ▲

Heavy metal parts now shipped in Cardboard instead of Wood

—THANKS TO NEW POLYKEN HIGH TENSILE TAPE

New Polyken High Tensile Tape enables the Hawker Manufacturing Company of Dayton, Ohio, to cut shipping costs by using cardboard cartons instead of wooden crates. This saving was never possible before because no other method or material satisfactorily closed and reinforced the cartons.

Here's why Polyken High Tensile, Cloth-Backed Tape does the job:

This is the only high tensile tape with non-split cloth backing—plastic coated to resist weather.

Excellent adhesive quality fuses this tape to the carton without crushing or cutting—provides lasting hold without creep or edge roll.

Application is fast—6 times faster than banding—and no special tools are required.

New Polyken High Tensile Tape now available in Gloss Black, No. 360; and Non-Staining Gloss White, No. 361. Write for free samples and specifications. Polyken, Dept. NED, 222 West Adams Street, Chicago 6, Ill.

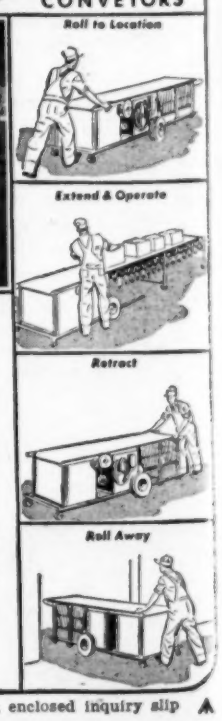
Polyken®

INDUSTRIAL TAPES

Department of Bauer & Black • Division of The Kendall Company

▲ For more details circle **NED-599 D3** on enclosed inquiry slip ▲

MODERN TIME AND COST SAVERS BUILT BY... Standard
GRAVITY & POWER CONVEYORS



SAVE TIME LOADING — UNLOADING WITH THE

E-X-T-E-N-D-O-V-E-Y-O-R

This compact, mobile, easily maneuverable power-belt conveyor unit extends to 46 ft. in either direction and retracts to 9 ft. 10 in. Reaches into cars, trucks, trailers. Handles boxes, bags, bundles, cartons, crates, cases weighing up to 150 lbs. Available in two models—1 way stretch and 2 way stretch—and 4 sizes. Write for Extendoveyor Bulletin—address Dept. NED-43.

STANDARD CONVEYOR COMPANY
General Offices: North St. Paul 9, Minn.
Sales and Service in Principal Cities

▲ For more details circle **NED-600 D3** on enclosed inquiry slip ▲

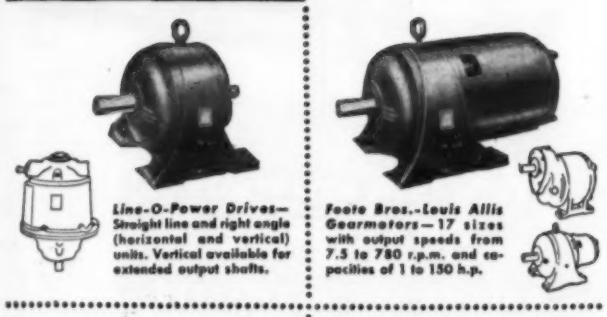
MAKE *FAST* PERMANENT REPAIRS ON LEAKING FAUCETS, VALVES

REPLACE Worn Seats with Endurable Bronze in a few minutes, STOP WASTE...SAVE MONEY

Economy VALVE SEAT CO.
1432 N. Keating Ave. Chicago 51, Illinois

For more details circle **NED-601 D3** on enclosed inquiry slip

LOW COST POWER TRANSMISSION



Line-O-Power Drives—Straight line and right angle (horizontal and vertical) units. Vertical available for extended output shafts.

Foote Bros.-Louis Allis Gearmotors—17 sizes with output speeds from 7.5 to 780 r.p.m. and capacities of 1 to 150 h.p.

Maxi-Power Helical Gear Drives—42 sizes available in this heavy-duty line. Ratios 2.08 up to 360 to 1, capacities up to 1550 h.p.

Hygrade Worm Gear Drives—Horizontal and vertical types. Hytop vertical accommodates long, unsupported output shafts.

WRITE FOR BULLETINS
LPB—*Line-O-Power Drives*
GMA—*Foote Bros.-Louis Allis Gearmotors*
HGB—*Hygrade Worm Gear Drives*
MPB—*Maxi-Power Helical Gear Drives*

FOOTE BROS.
Better Power Transmission Through Better Gears
FOOTE BROS. GEAR AND MACHINE CORPORATION
4545 S. WESTERN BOULEVARD, CHICAGO 9, ILLINOIS

For more details circle **NED-602 D3** on enclosed inquiry slip

PALNUT Trademark LOCK NUTS

for quick, secure fastening at low cost

—and they STAY TIGHT!

Millions of light sheet metal and parts assemblies are securely fastened with low-cost, fast-assembling PALNUT Lock Nuts. Wherever you have a nut-and-screw assembly, find out how PALNUTS can save you money and keep your products tight in service. Many sizes, types and finishes for every need.

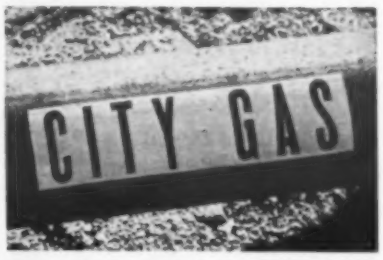
DOUBLE LOCKING ACTION
When the PALNUT is tightened, spring tension (A-A) is exerted upward on the screw thread and downward on the part, while arched, slotted jaws grip the screw like a chuck.

Free samples and catalog
Send details of assembly, screw threads, etc. for samples and latest catalog.

THE PALNUT CO.
45 Cordier St., Irvington 11, N. J.
In Canada: P. L. Robertson Mfg. Co., Ltd., Milton, Ont.

For more details circle **NED-603 D3** on enclosed inquiry slip

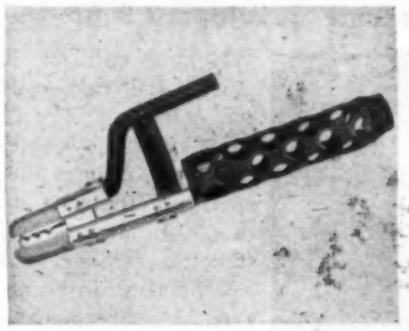
PIPELINE MARKERS
adhere to pipe or conduit securely



Identification of pipes, cable, conduit and flow lines is simple matter with Tel-A-Pipe markers which identify by color as well as by large clear wording. Available in four types and in over 200 stock descriptions, these self-adhering labels can also be printed to specifications. They are quickly wrapped around pipe, adhere without moistening and stick permanently indoors or outdoors. Sizes range from 2½ x 9-in. to 2¼ x 1-in. markers for various diameters of pipe. Made by **Western Lithograph Co.**, Westline Products Div., 604 E. Second St., Los Angeles 54, Calif.

For more details circle **NED-604 D3** on enclosed inquiry slip

ELECTRODE HOLDER
insulated model rated at 400 amp



Designed for long service life and cool operation, the Cooltong 400-amp insulated electrode holder has nose of "sandwich" construction which consists of a copper core between four and six layers of laminated, glass-impregnated, plastic cloth. The copper core acts as reinforcement and dissipates heat. Insulation-covered jaws are made of highly conductive Mallory 3 metal of a nonspatter type. They accommodate ⅛ to 5/16-in. electrodes. Frame insulation is covered with copper sheathing, and holder handle has large holes for ventilation. Made by **Lincoln Electric Co.**, Dept. H, 22801 St. Clair Ave., Cleveland 17, O.

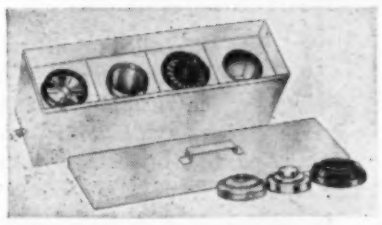
For more details circle **NED-605 D3** on enclosed inquiry slip

FORK TRUCK ACCESSORY
for low clearance stacking

Power lift trucks equipped with free lift accessory can efficiently stack materials inside freight cars, trucks, under balconies or in other low overhead clearance locations. Accessory fits all Hi Duty fork lift trucks and is completely hydraulic. Forks can be lifted as high as 5 ft 4 in. before the mast begins to move upward on a truck with a standard 9 ft mast which has a 6-ft collapsed height. Truck with a 7-ft mast which collapses to 5½ ft has a free lift of 4½ ft. Made by **Transitier Truck Co.**, 2475 N. W. 23rd Ave., Portland 10, Oreg.

For more details circle **NED-606 D3** on enclosed inquiry slip

FILM PROCESSING UNIT
for developing 35-mm roll film



Adaptable for use with Nikor, Kodak, FR or Yankee spiral roll film developing tanks, the FM film processing unit is made of type 316 stainless steel for resistance to chemical corrosion. The units are designed for processing 35-mm film and are so constructed that water enters on one side and leaves on the other. Water can also be introduced on upper or lower level and exhausted from the other level. Use can be for fine grain or normal developing procedure, with provision for presoaking. Three models, each varying in size, are made for use with specific spiral film developing tanks. Made by **Bar-Ray Products, Inc.**, 211 25th St., Brooklyn 32, N. Y.

For more details circle **NED-607 D3** on enclosed inquiry slip

"Weld-Bilt" EQUIPMENT GIVES YOU LONGER SERVICE IN LABOR-SAVING MATERIALS HANDLING

You can SEE the greater strength and durability in WELD-BILT Equipment . . . in heavier arc-welded construction, in sturdier operating parts, in many innovations that assure easier, friction-free operation. Every piece of "Weld-Bilt" equipment is designed to save operator fatigue, protect product and save money both on original cost and maintenance expense.

You can easily PROVE "Weld-Bilt's" superiority through many more years of actual performance in hundreds of plants all over the Nation. It means your lowest possible investment-per-year in time and labor saving.

For more details circle **NED-608 D3** on enclosed inquiry slip

which SOLID TIRE for your product?

Monarch cushion tires of tough, wear-resisting stock have high capacity for absorbing shock and cushioning fragile loads over rough surfaces; excellent for high lift stability.

Monarch industrial tires are supplied on wheels by a majority of wheel and hand truck manufacturers.

For applications requiring extra traction, this tire is the first in its field.

Designed for low ton mile cost, this tire is particularly efficient on high lifts where sway is a factor.

The groove tire, used primarily on large industrial trucks and trailers, rounds out the complete Monarch line of solid industrial tires.

MONARCH makes the complete line of solid industrial tires

THE MONARCH RUBBER COMPANY
201 LINCOLN PARK · HARTVILLE, OHIO

SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

For more details circle **NED-609 D3** on enclosed inquiry slip

PURE WATER
DISTILLED WATER?
PROBLEMS SOLVED WITH Barnstead EQUIPMENT
DEMINERALIZED WATER?

In hundreds of manufacturing processes, where complete purity is needed, Barnstead Stills provide the highest-quality, lowest-cost, chemically pure, sterile water from ½ to 1000 gallons per hour. With over 100 different models to choose from, Barnstead can provide the exact still to fit your particular needs. For Barnstead Laboratory and Industrial stills are the proven standard of the scientific and industrial world.

Where modern manufacturing processes require only high-test mineral-free water, Barnstead Demineralizers are the best producers . . . 5c per 1000 gallons with a minimum of supervision and maintenance. Many new industries are turning to Barnstead Demineralized Water for greater production, fewer rejects and better quality control.

WRITE

Catalog #123 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, authoritative, unbiased. Write Today!

Barnstead STILL & STERILIZER CO.
First in Pure Water since 1878
16 Lanesville Terrace, Forest Hills, Boston 31, Mass.
For more details circle NED-610 D3 on enclosed inquiry slip

all new! THROUGH AND THROUGH
NEW DESIGN
Stainless Steel Meter

ACCURATELY MEASURES LIQUIDS FOR FOODS, PHARMACEUTICALS, CHEMICALS AND CORROSIVE LIQUORS

Rockwell Rotocycle Stainless Steel Industrial Meter, Type 2BC

Now you can have positive metered accounting for corrosive liquids that previously could not be handled by ordinary meters. Type 2BC Rockwell Rotocycles are made of stainless steel, inside and out. They are lasting, accurate, easy to clean. Install them with certainty for batch mixing formulas, for inventory control, for cost and tax record accounting. Quantity Control Registers and Remote Registration Systems are available. Described in bulletin OG-403. *Write Rockwell Mfg. Co. Dept. C-8, Pittsburgh 8, Pa.*

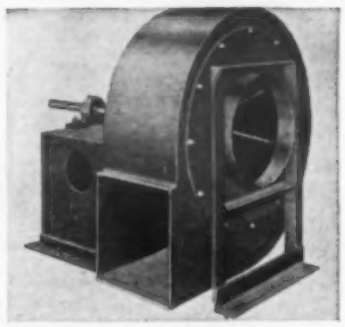
You Can RELY ON ROCKWELL INDUSTRIAL METERS
For more details circle NED-611 D3 on enclosed inquiry slip

DRILL HOLES AS SMALL AS .030" IN ANY METAL OF ANY HARDNESS OR THICKNESS!

The M-300 Elox Electron Drill* combines the best in the 'arc machining' process. In addition to drilling holes as small as .030" it is adjustable for machine finishes ranging from *coarse, fine, extra fine and super fine* ...on any metals from magnesium to cemented carbide. The M-300 with exclusive Elox Automatic Feed allows for continuous operation with much of the human element removed. Using electrodes costing less than 3¢ per inch, with 'super fine' cutting, 1" of electrode will cut as much as 33" of hardened steel! Here indeed, is a dual-purpose machine that is being used for production machining of hardened steels and for removing broken drills in salvage. Write today for details and list of users.

ELOX CORPORATION OF MICHIGAN
738 N. ROCHESTER RD. • CLAWSON, MICHIGAN
For more details circle NED-612 D3 on enclosed inquiry slip

EXHAUST FANS
for removal of sawdust, chips, dust



Woodworking plants and saw mills can use this line of extra heavy duty exhaust fans for removal of sawdust, shavings, chips, dust and wood scraps. Built of heavy gage steel, compact fans have a welded housing with removable side plates for various discharge arrangements. Blast wheels are of open type construction. Heavy duty dustproof bearings are used, with both located on one side. Fans are made in standard six-blade models in 20 to 80-in. sizes and in slow speed 12-blade models from 30 to 80 in. sizes. Made by **Dependable Machine Co.**, 200 High Point Rd., Greensboro, N. C.

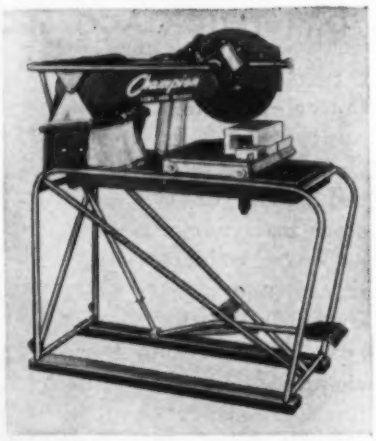
For more details circle NED-613 D3 on enclosed inquiry slip

VERTICAL GASOLINE ENGINE
two-cycle unit develops 2.5 hp

Weighing only 25 lb, power-Pak two-cycle air-cooled vertical-shaft gasoline engine develops 2.5 hp at 4000 rpm. It features die cast aluminum construction, precision ball bearing on crankshaft, replaceable needle bearings in connecting rod and magneto ignition. Handy recoil starter has finger-fitting grip. Made by **Food Machinery & Chemical Corp.**, Bolens Products Div., 247 S. Park St., Port Washington, Wis.

For more details circle NED-614 D3 on enclosed inquiry slip

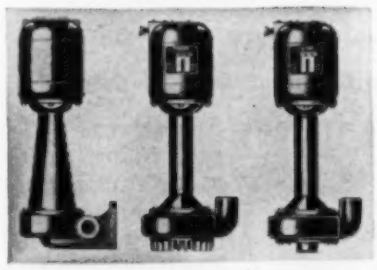
MASONRY SAW
lightweight model is portable



Built of welded tubular steel, the Tak-A-Bout lightweight portable masonry saw is equipped with a 14-in. capacity blade and 1½-hp motor or 12-in. capacity blade and 1 hp motor. Each size is produced for wet or dry cutting, making four models in all. Dry models can be converted to wet cutting, by a conversion kit, making them self-contained units. The 245-lb saws can be equipped with wheels. Made by **Champion Mfg. Co.**, Dept. XX, 2028 Washington Ave., St. Louis 3, Mo.

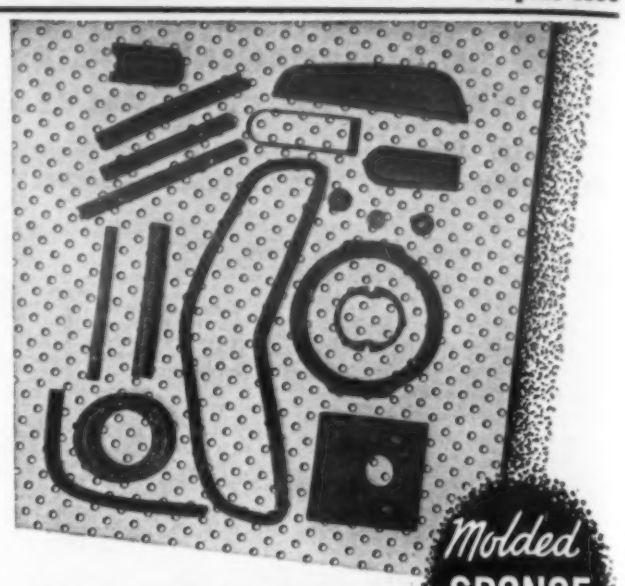
For more details circle NED-615 D3 on enclosed inquiry slip

CENTRIFUGAL PUMPS
handle solids and abrasive fluids



Practical for all types of liquids not too viscous or too corrosive for modern corrosion resistant alloys, models VBH, VD and VE centrifugal pumps are available in 1/20 to 5-hp sizes in variety of port styles and mounting brackets. Larger sizes are rated up to 148 gpm free flow and 9 gpm at 124.7-ft head. Separate intake bracket and support column permits removal of motor and column for maintenance without disconnecting intake bracket and discharge piping. All are seal-less. Double vane impeller is balanced. Internal design assures self-cleaning and prevents clogging when handling liquids with high abrasive or solids content. Motors of any required electrical characteristics can be provided. Made by **Detroit Harvester Co.**, Pioneer Pump Div., 19661 John R St., Detroit 3, Mich.

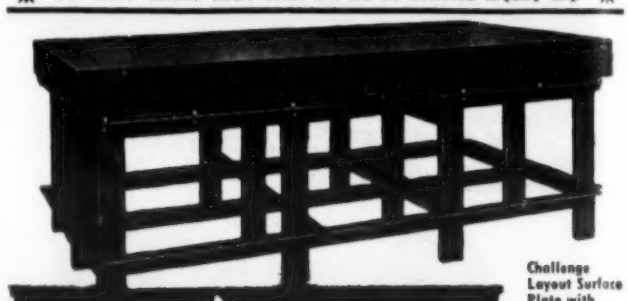
For more details circle NED-616 D3 on enclosed inquiry slip



Molded SPONGE RUBBER Parts

Molded chemically blown sponge rubber products made to your designs or blueprints. Specially compounded materials retain resilience after long service life. All shapes and sizes to meet your specific requirements. Write today for full facts.

REPUBLIC RUBBER DIVISION
LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN 1 OHIO
INDUSTRIAL RUBBER PRODUCTS
For more details circle NED-617 D3 on enclosed inquiry slip



Challenge Layout Surface Plate with smooth, highly accurate surface.

CHECK THESE ADVANTAGES OF CHALLENGE precision LAYOUT SURFACE PLATES

Challenge Layout Surface Plate with "Tee-Slots".

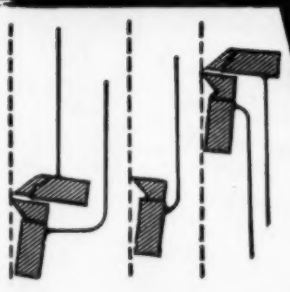
- Smooth accurate surfaces for layout, inspection or assembly.
- Built of fine-grade, special analysis semi-steel.
- Sixteen standard sizes, six inches thick — other sizes to order.
- Available with "Tee-Slots", or with grooving, scoring or machining for checking and assembly.
- Plates can be grooved and keyed so that two or more can be assembled into one large complete unit.

SEND FOR CATALOG
Write today for catalog which includes complete information and prices on Challenge Surface Plates.

Challenge TRADE-MARK

THE CHALLENGE MACHINERY COMPANY
Office, Factories and Show Room: Grand Haven, Michigan
732
For more details circle NED-618 D3 on enclosed inquiry slip

BETA CHART PENS



...HOLD 2 to 4 TIMES MORE INK

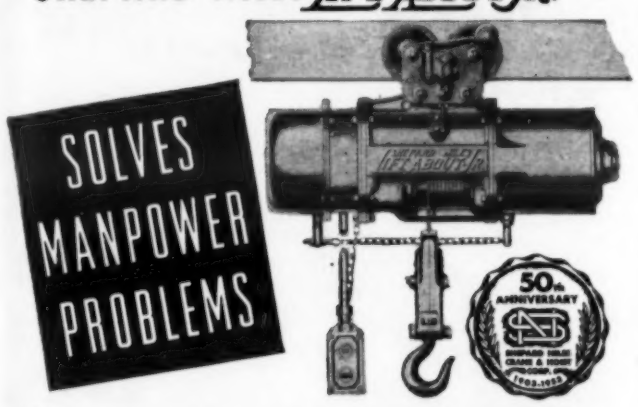
Beta Fountain Pens hold two to four times the ink of ordinary chart inking pens. Regardless of the line thickness Beta Pens produce a smooth unbroken and uniform line. Pens shown are approximately actual size and can be arranged to reduce time interval between static and differential lines to only a few minutes. Beta Pens are especially suitable for seven day records. Price $1.10 (lower prices in quantities).

Send for bulletin No. 110.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.
Available for Early Delivery
For more details circle NED-619 D3 on enclosed inquiry slip

▲ For more details circle NED-620 D3 on enclosed inquiry slip ▲

SHEPARD NILES LIFT ABOUT JR.



- One man replaces many—and moves more goods faster—with a low-cost Shepard Niles Lift About Jr.! This light-weight Electric Hoist frees floor space for production, puts waste ceiling area to work. Loads of 500, 1,000 or 2,000 lbs. are handled easily by an older man, woman or youth.
- Learn how the Lift About Jr. fits into your production picture from a Shepard Niles representative. He'll help you select the right capacity and controls for your handling job. Write for latest bulletins today—and ask to have a representative call.

SHEPARD NILES
CRANE AND HOIST CORPORATION
1827 SCHUYLER AVENUE, MONTOUR FALLS, N.Y.

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If the equipment you design calls for 29.9" of vacuum or 25 psi pressure

Wings in this Leiman Pump take up their own wear, year after year, and always maintain contact with cylinder wall. *See our Listing in Sweet's Product Design File*

Write for 16-page catalog and blueprints of typical applications on Leiman rotary positive pumps—choice of industry since 1889.

LEIMAN BROS., INC.
167 Christie Street, Newark 5, N. J.

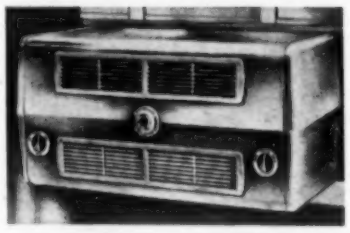
▲ For more details circle NED-622 D3 on enclosed inquiry slip ▲

SPROCKETS & ROLLER CHAIN
both are available from stock

Application of Taper-Lock principle to roller chain drives makes it possible to offer the sprockets and roller chain from stock. Wide range of sizes offered eliminates need for reboring sprockets to fit shafts and regrinding or turning of shafts to get a tight fit. Bore sizes range from ½ to 3 in. in 1/16-in. increments in eight bushing sizes. Sprockets have no flange or protruding parts. They, like the chain, are made to ASA standards and will take any American standard chain. Range of B-type steel sprockets, 40 to 100-pitch, is stocked, as is chain in 10-ft lengths. It can also be furnished in 50 and 100-ft reels. Made by **Dodge Mfg. Corp.**, 600 S. Union St., Mishawaka, Ind.

▲ For more details circle NED-623 D3 on enclosed inquiry slip ▲

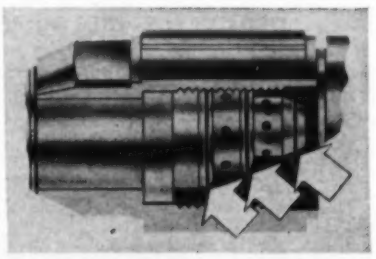
WINDOW AIR CONDITIONER
cools up to 550 sq ft of space



Rated 1 hp, model G10A window type air conditioning unit is available in either brown or ivory and is designed to comfort cool up to 550 sq ft of space. Installed easily in any double-hung 28¾ to 48-in. wide window, unit circulates 310 cfm and introduces 80 cfm of fresh air for ventilation. All bracket accessories, including Masonite panel, weatherstripping, brackets and screws are included, and unit can be installed by two men in 15 to 20 minutes. Unit operates on 230-v 50/60-cycle ac. List price is $396.50. Made by **Quiet Heet Mfg. Corp.**, Quiet Kool Div., Dept. A, 135 N. J. R. R. Ave., Newark 5, N. J.

▲ For more details circle NED-624 D3 on enclosed inquiry slip ▲

WELDING TORCH MIXER
attaches to torch without a wrench



Gas-tite servene seating rings are incorporated in the Torchweld 54-5 mixer for attachment to the standard No. 54 Torchweld torch handle without using a wrench. Gasket type seating rings are also found on a new model flame cutting attachment for the same torch handle. Apparatus is valuable for operations entailing frequent changes from welding to cutting and vice versa. Seating rings are easily replaced. Made by **National Cylinder Gas Co.**, 846 N. Michigan Ave., Chicago 11, Ill.

▲ For more details circle NED-625 D3 on enclosed inquiry slip ▲

PROPORTIONING CONTROL
oil-air type has tight shut-off

Ratiotrol device for correctly proportioning oil and air flow for combustion has been improved by use of a tight shut-off, an optional accessory. It eliminates the need for solenoid valves for hot furnaces where on-off operation is required. Proportioning device has a built-in ratio which provides an outlet oil pressure 12 times greater than the air pressure. Several burners can be serviced by one Ratiotrol. Two sizes are offered, No. 13-01 rated at 25 gph and No. 13-0 rated at 90 gph. Tight shut-off models are designated at No. 13T-01 and 13T-0. Made by **North American Mfg. Co.**, 4453 E. 71st St., Cleveland 5, O.

▲ For more details circle NED-626 D3 on enclosed inquiry slip ▲

GOT DC PROBLEMS?

Solve them with NOBATRONS*

Sorensen NOBATRONS (low-voltage, high-current DC sources) are economical, accurate, durable, easy to maintain. A wide variety of standard models is available to meet practically all requirements. Write for information.

COMMON NOBATRON SPECIFICATIONS

Input voltage range	95-130 VAC, single φ, 50-60~ High-current units 208/115, 3φ, 4-wire, wye.
Output range	6, 12, 28, 125, 200 VDC @ 5—350 amps. Adjustable ± 10% with rated accuracy,—25% with lesser accuracy.
Regulation accuracy	± 0.2% from 1/10 to full load.
Ripple voltage	1% RMS. Time constant 0.2 seconds.

Also available — Nobatron-Rangers which have adjustable outputs of 3-30VDC @ 3-30 amps, 3-135VDC @ 1-10 amps, 100-300VDC @ 1-10 amps. Other specifications similar to above.

* Reg. U. S. Pat. Off.
by Sorensen & Co., Inc.

SORENSEN

SORENSEN & CO., INC.
375 Fairfield Avenue
Stamford, Conn.

▲ For more details circle NED-627 D3 on enclosed inquiry slip ▲

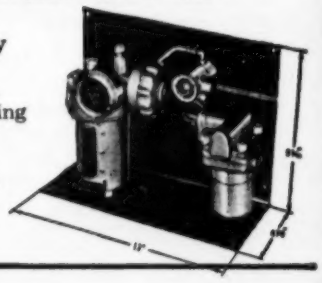
ALEMITE OIL-MIST

Saved $2400 first year

...extended bearing life from 20 weeks to one year and four months

Eastern Textile Mill Breaks Bottleneck, Cuts Downtime, Ups Production!

Bearing temperatures were running 200° on an important blower. Production losses totaled $1000 with each frequent bearing failure. After careful study of the problem, management installed an Alemite Oil-Mist unit costing little more than $100. Result: No bearing failures; downtime eliminated! $2400 *saved* to date!



Alemite Oil-Mist is a fully automatic system which atomizes oil into mist . . . distributes it through tubing to bearings . . . applies a constant uniform oil film to groups of bearings designed either for oil or grease lubrication.

delivers oil to bearings 3 ways

1. Oil-Mist as Such. For any type of anti-friction bearing—ball, roller or needle.

2. Oil in Spray Form. For open and enclosed gears and chains. Nozzle partially condenses mist so that it can be directed onto a concentrated area.

3. Oil-Mist Condensed. For plain bearings, slides, ways, vees, cams and rollers. In these applications, condensing fittings convert oil mist to liquid oil.

Get the facts NOW!

Let us send you the complete story on Oil-Mist. Specifications, models, typical applications, actual case histories. Get yours now. Write Alemite Division of Stewart-Warner, Dept. NED-43, 1850 Diversey Parkway, Chicago 14, Illinois.

▲ For more details circle NED-628 D3 on enclosed inquiry slip ▲

NEW WAY TO STOP RUST

Easily! Quickly! Without Slushing

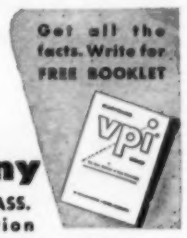
MARVELLUM VPI WRAP

Paper coated with a Volatile Corrosion Inhibitor

Without VPI With VPI

Look at these steel samples — they tell the story. After 3 years of unsheltered storage outdoors in an industrial marine atmosphere, only the VPI wrapped sample on the right is still bright and clean. The untreated sample on the left was wrapped in plain kraft, the middle one treated with a good rust-preventive oil and wrapped in Grade A barrier material. All were overwrapped with kraft-asphalt paper. *Your* steel or aluminum parts can be equally well protected from corrosion. VPI, developed for government use during the war, is now available to everyone. Economical, easy to use, VPI can save you time and money.

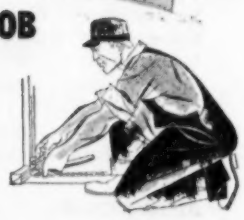
Marvellum VPI is available in sheets, envelopes or special containers. Marvellum has complete facilities under one roof for designing, producing and coating VPI Wraps. Also makers of a wide range of other barrier materials to meet your needs for product protection. Distributors in all major cities.



The Marvellum Company
32 APPLETON STREET HOLYOKE, MASS.
First and Foremost in VPI Protection

For more details circle NED-629 D3 on enclosed inquiry slip

for the MAN ON THE JOB



84 pages crammed with ideas, pictures and data on how to frame, hang, support and mount all kinds of mechanical and electrical equipment with adjustable UNISTRUT All-Purpose Metal Framing.

Perfect for the man on the job . . . most useful, too, as a handy reference catalog for the architect, engineer, draftsman, contractor, or builder. Just pocket size, easy to handle, always within reach when you want it. Order your free copy of the *New* UNISTRUT Catalog No. 800 today! With UNISTRUT channel and fittings you can build all types of conduit, cable, pipe and tubing hangers and supports, framing, mounts, racks, tables, benches, and many other structures with just a hacksaw and a wrench. No drilling, no welding, 100% adjustable and re-usable.

These are the Basic Components of the UNISTRUT Metal Framing System

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UNISTRUT PRODUCTS COMPANY
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Please send me a copy of the new UNISTRUT Pocket Catalog No. 800, without obligation.

Name.....
Company.....
Address.....
City.....Zone.....State.....

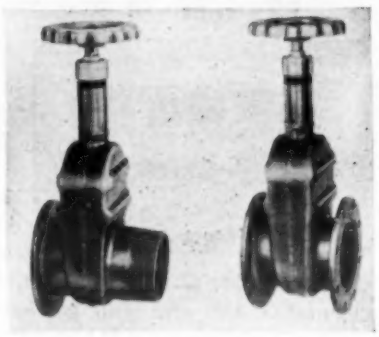
For more details circle NED-630 D3 on enclosed inquiry slip

SAFETY PARTS CLEANING TANK attached to bench near machines

This plunge type parts cleaning tank can be attached to bench convenient to machine operator. It enables him to clean parts as they come from machine, and make micrometer checks or other inspection without interrupting production. It holds 2 gal of solvent or cleaning agent and is equipped with perforated metal plunger dasher. Hinged cover folds out of the way and is closed when tank is not in use to prevent loss of solvent. Dasher acts as flame arrester. Made by **Protectoseal Co.,** 1966 S. Western Ave., Chicago 8, Ill.

For more details circle NED-631 D3 on enclosed inquiry slip

GATE VALVE fast acting unit is light in weight



Ability to withstand test pressures of 600 psi in both open and closed positions is feature of this fabricated gate valve which also has light weight, fast action and low maintenance. Straight - through design reduces turbulence. Valve is suited for all services requiring steel units. Made in 3-in. size, it is offered with hose gate with flanged connection and threaded outlet and with the flanged gate with both connection and outlet flanged. Vitaulic and other special connections or combinations are made on request. Made by **Allegheny Valve Co.,** 344 Pennsylvania Ave. W., Warren, Pa.

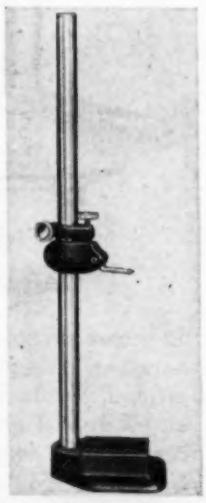
For more details circle NED-632 D3 on enclosed inquiry slip

MERCURY RECOVERY UNIT processes mercury-laden dusts

Use of Mer-Vac equipment provides a method of recovering mercury globules and mercury-laden dusts and also combats the hazards of mercury vapor poisoning. Unit is a combination of an enlarged gas mask canister for mercury vapor collection and a powerful industrial vacuum cleaner for mercury recovery. A synchronous timer indicates when the canister contents must be replaced and an air circulation system for the motor prevents amalgamation of wiring connections and parts. Canister parts are stainless steel and porcelain enamel and mercury trap is made of glass. After recovery of the mercury, the atmosphere can be further purged by continued air circulation through the canister. Made by **Acme Protection Equipment Co.,** 3039 W. Lake St., Chicago 12, Ill.

For more details circle NED-633 D3 on enclosed inquiry slip

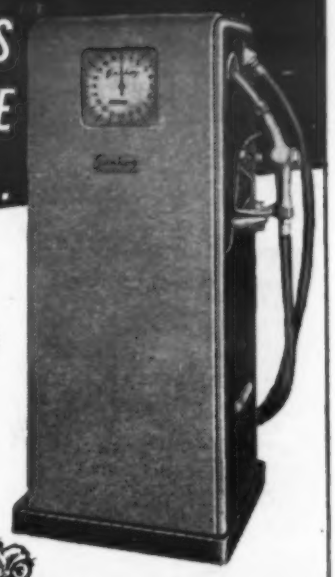
HEIGHT GAGE also used as scriber or comparator



Design features of this height gage make it quickly adaptable for use as a height gage, comparator or scriber. Gage is available in column lengths of 18 and 24 in. An improved model, it has large post diameter and flanged base for increased accuracy and stability. Gage is supplied in a hinged cover hardwood case. Made by **H. E. Dickerman Mfg. Co.,** Dept. ED, 321 Albany St., Springfield, Mass.

For more details circle NED-634 D3 on enclosed inquiry slip

If you buy More than 125 GALLONS of GASOLINE A MONTH . . .



This New Electric Pump will Pay for itself

WRITE OR WIRE FOR DETAILS TODAY

WM. M. WILSON'S SONS, INC.
MANUFACTURERS OF GASBOYS, KERO-BOYS, OILBOYS, ROTABOYS
GENERAL OFFICES AND PLANT AT LANSDALE, PA.

For more details circle NED-635 D3 on enclosed inquiry slip

Commander TAPPER

★ Wider Range...1 Tapper Handles #0 to 3/4" Taps

★ Automatic Tap Protection

★ Furnished to fit any Drill Press

Commander—"The Tapper That Thinks For Its Operator," has the adjustable full range torque control that instantly stops any tap when it becomes dull, loaded, strikes a hard spot or bottoms in blind hole tapping. Assures maximum tap protection, higher production, even with inexperienced operators.

Your nearby Commander Distributor can give you a demonstration in your own plant. Write for his name and a copy of the NEW Commander Full Line Catalog #851

COMMANDER MFG. CO.
4220 W. Kinzie St. Chicago 24, Ill.

Product of *Commander*... Builder of Production Tools

For more details circle NED-636 D3 on enclosed inquiry slip

HEAT SAVER! INSTALLED WITHIN 3 HOURS!

...KEEP WINTER OUT OF YOUR PLANT!

PREST-O-MATIC
The COMPLETE ELECTRICAL DOOR UNIT

NOTHING ELSE TO BUY
•
NO ALTERATIONS REQUIRED
•
PERMIT FULL USE OF DOORWAY WIDTH

Fully automatic, motor-operated, for approach pull-cord, floor plate or electric eye control. Includes doors, frames, ALL hardware and motor operator all ready for installation by plant crew in 3 hours!

OPEN OR CLOSE IN 3½ SECONDS

Designed "in balance" for faultless functioning, unconditionally guaranteed; with or without pass doors. Trial orders have brought scores of reorders from large and small manufacturers. Get Catalog details!

CLARK DOOR COMPANY
511 Hunterdon Street • NEWARK 8, N. J.

For more details circle NED-637 D3 on enclosed inquiry slip

Saves up to 40% Space!

Streamlined construction of the new T-J Cylinders *eliminates tie rods . . . reduces head size . . .* and *saves up to 40% in mounting space!* In addition, a new high in strength is achieved with solid steel heads and heavy wall seamless steel body . . . leakproof construction . . . extra high safety factor. Cylinder walls are precision honed and hard chrome plated for long-life efficiency. Available with new T-J Super Cushion Flexible Seals. Many standard sizes and styles . . . cushioned and non-cushioned . . . for pushing, pulling, lifting, clamping or control jobs. Write for bulletin 8152. The Tomkins-Johnson Co., Jackson, Michigan.

37 YEARS EXPERIENCE T-J
TOMKINS-JOHNSON
RIVETORS · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

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ADHERES to almost any metal
INVISIBLE on all of them

DULAC CLEAR UNIVERSAL LACQUER #462—
Here is a *single* water-white lacquer with remarkable adhesion to practically *all* metals. Withstands salt spray and weatherometer tests for exceptionally long periods. Resists heat, cold, weather, stain, perspiration. Dries out of dust in 5 to 10 minutes . . . hard in one hour. Applied by spray or dip.

For complete information, write for Technical Data Bulletin #110.

PIONEERS IN PROTECTION · 78th YEAR · MASTIC 1874
MAAS & WALDSTEIN CO. 2121 McCARTER HIGHWAY NEWARK 4, NEW JERSEY
Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill. • Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.
MANUFACTURERS OF INDUSTRIAL FINISHES

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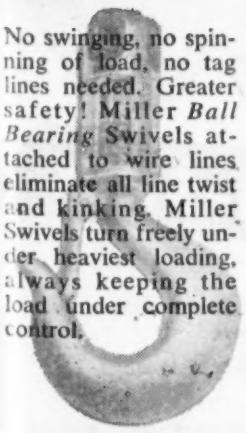
PERFECT HOISTING

Miller SWIVELS

SAVE TIME, MONEY, WIRE LINE PREVENT ACCIDENTS

No swinging, no spinning of load, no tag lines needed. Greater safety! Miller *Ball Bearing* Swivels attached to wire lines eliminate all line twist and kinking. Miller Swivels turn freely under heaviest loading, always keeping the load under complete control.



Ideal for cranes, hoists, all lifting equipment.

Easily attached to any wire line

Let us work with you to adapt Miller Swivels to your particular needs.

- 16 different types (hook, clevis, swedge, eye, or stud ends)
- 11 different sizes (capacities from 50 lbs. to 150 tons)

Send for illustrated literature, prices, and name of local representative.

GENERAL MACHINE & WELDING WORKS
1100 EAST SECOND STREET ★ POMONA, CALIFORNIA

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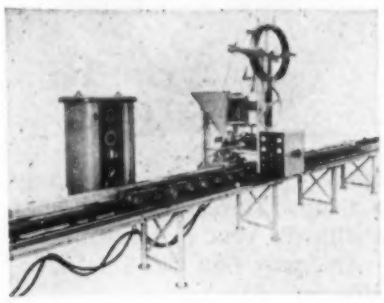
ROOM AIR CONDITIONERS
many of 13 models from 1/3 to 2 hp will both heat and cool

Utilizing the heat pump principle, line of reverse cycle room air conditioners, consisting of 13 models ranging from 1/3 to 2 hp, will both heat and cool. Besides this dual heating and cooling feature and the modulation control which prevents unit from over-cooling, all conditioners have hermetically sealed refrigeration circuits. The 1/3-hp unit which installs in almost any type window has four-way adjustable air distribution grilles, easily reached controls and disposable filters.

The 3/4-hp console type conditioner, which will install in any window that opens, features the modulation control and air intake which does not protrude beyond window sill. Four models in the 1-hp size include window and console types. Larger 1 1/2 and 2-hp console type units feature the step-matic control which functions as a humidity balancer and selection of either "fan" or "cooling" operation. Made by **York Corp.**, 111 Roosevelt Ave., York, Pa.

▲ For more details circle **NED-641 D3** on enclosed inquiry slip ▲

WELDERS & POSITIONERS
both automatic in operation and perform a variety of operations

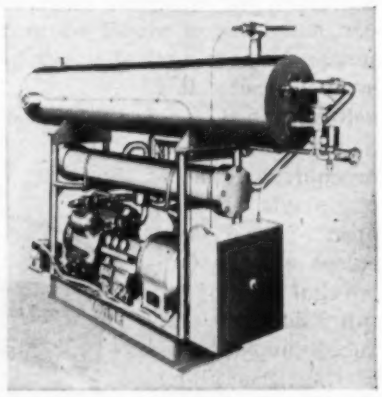


Features of Rexarc automatic welders include provison for both low and high voltage welding, high frequency starting and stabilization for steady arc, control over low arc voltage and amperage which minimizes stress and dilution of parent metal. Welding can be lineal or cross-bead on flat or circular shapes, continuous or in sequence. The removable head can be transferred from one welding positioner to another.

Together with the automatic positioners, welders are used for rebuilding track rails, rollers, grousers, scraper plates, shovel dipper sticks, trunnions, box beams, structural shapes, spiral feed screws, crusher rolls, mandrils, shells and fabrications of many types. Track rail positioner is built up of standard 10-ft sections and is normally 40 ft long. Bed is 28 in. wide and clearance under the carriage is 11 in. Positioner is also offered for rolls of any type and size. Machines can be designed to fit specific requirements. Made by **Sight Feed Generator Co.**, Dept. 100, West Alexandria, O.

▲ For more details circle **NED-642 D3** on enclosed inquiry slip ▲

PACKAGED WATER CHILLER
simplifies refrigeration installation and minimizes air conditioning costs



Adaptable to medium-size air conditioning systems, this cold generator or packaged water chiller provides a single-unit source of large quantities of cold water for air conditioning and refrigeration systems in range of 10 to 50 tons of cooling. This self-contained unit requires only simple water and electrical connections. Equipment in assembly includes compressor, condenser, controls, motor and accessories.

Ten sizes will have capacities of 10 to 50 tons of refrigeration. Power and water consumption are adjusted automatically to the demand for cooling in regular stages. The compressor's plastic-coated valves, lubrication system, shaft seal and other features are designed to minimize need for servicing and maintenance. Made by **Trane Co.**, 2018 Cameron Ave., La Crosse, Wis.

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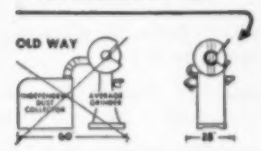
Hammond of KALAMAZOO

2 IN 1 NO-DUST GRINDER

SAVE OVER 50% FLOOR SPACE THE HAMMOND WAY



DUST-LADEN AIR IS A MENACE!
- Protect your employees' health.
- Protect nearby machine tools from dust and grit.
- Save floor space — requires only 6 1/2 square feet. For 10", 12", and 14" wheels. Write for Catalog.

Hammond Machinery Builders Inc.
1623 DOUGLAS AVENUE • KALAMAZOO 54, MICHIGAN

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Here's how to FABRICATE SHEET PLASTIC *Inexpensively*

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Taber plastic fabricating machines and methods are being used by cost-conscious, profit-minded producers of plastic products, everywhere! That's because Taber equipment handles sheet material .005"-.020" thickness FASTER and at a LOWER COST. You owe it to yourself and to YOUR COMPANY to, at least, get the facts. All the details are in the free booklet.

SHEAR HARDNESS and DIAMOND SCRATCH TESTER

Tests quality of plastic material and plastic coated surfaces to resist scratches, digs, scrapes and other physical damage not classed as normal wear. Handles specimens from thin plate to 1/4" thickness. Used everywhere for precision perfect tests.

The Taber STIFFNESS GAUGE

Determines both INITIAL and NORMAL stiffness of sheet and wire specimens and gives report from DIRECT READING. Precision shear cuts exact specimens from paper or plastic (up to 20 pt.) to eliminate possible variation in results.

Taber INSTRUMENT CORPORATION
SECTION 16
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COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....

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Major CHANGES MADE Minor WITH Trumbull Flex-A-Power® Busways

Plant expansion, or rearrangement of production machines, becomes a simple matter when a Flex-A-Power electrical distribution system is installed. Machines plug in almost as easily as your toaster. New sections can be added quickly and inexpensively. An entire system can be dismantled and reinstalled with almost 100 per cent re-use of material.

Available in these types:

* **Type LVD Feeder Busway,** 600-4000 amps, 2-, 3- and 4-pole, to 600 v.
* **Type FVK Plug-In Busway,** 225-1000 amps, 2- and 3-pole and 3 phase 4 wire, to 600 v.

Type LTG Plug-In and Trolley Busway, 50 amps, 2-, 3- and 4-pole, 300 v., AC or DC.

Type TK Heavy Duty Trolley Busway, 100, 200 and 400 amps, 2- and 3-pole, to 600 v.

* *With copper or aluminum busbars.*

TRUMBULL ELECTRIC
DEPARTMENT OF GENERAL ELECTRIC COMPANY
PLAINVILLE, CONN.

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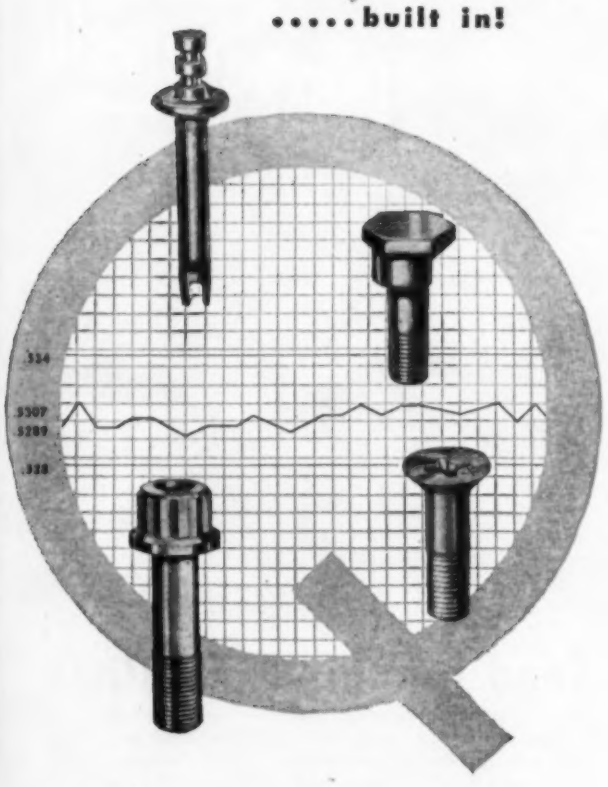
measured Quality .....built in!



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guaranteeing the degree of excellence you require in Fasteners and Special Metal Parts!

Camcar technicians build quality, not inspect it, into parts and fasteners. That's why Camcar developed Cold-Flow processing, to furnish peak control in metal forming.

It's also the reason you can expect top finish, accuracy, grain structure and tensile strength when you use Camcar Cold-Flow parts. Constant quality control checks insure the consistently superior parts produced through Cold-Flow techniques.

When you need Fasteners or Special Metal Parts—

Telephone 5-9451 or Teletype RK 8653

CAMCAR SCREW & MFG. CORP.
601 Eighteenth Avenue • Rockford, Illinois

"PRODUCTION DESIGNED FOR YOUR ASSEMBLY LINE"

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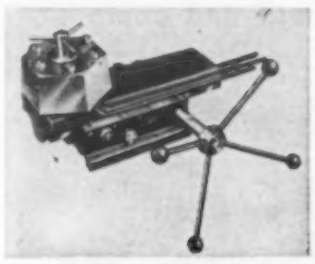
BED TURRET features tilting head



Tilt-Head design of Newton self-indexing bed turret makes it possible to swing tools as large as 6 in. in diameter over the ram and also provides working travel of 7¼ in. Tools are always in alignment with the spindle on the working stroke. Manual or automatic indexing is possible through a clutch arrangement. Turret is designed for most 10, 11 and 12-in. lathes. Made by **A. K. Tool Co.,** Dept. NED, 2029 Blake Ave., Los Angeles 39, Calif.

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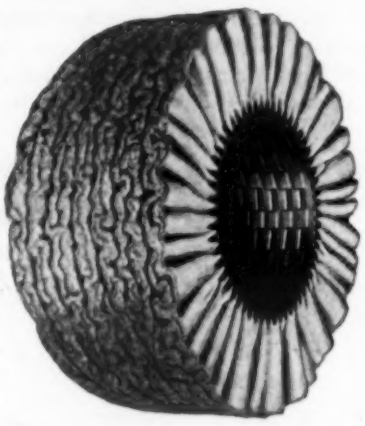
CENTERLESS RING BUFF holds buff cloth securely

Rigid steel ring employed in Automatic Centerless Buffs grips cloth securely in its channel and facilitates making up assemblies. Pre-assembly is accomplished with use of two tubes, each one welded to inside of the automatic buff flange. One tube fits telescopically inside other, and set-up of buffs is secured tightly between the two flanges. The buffs are locked together in a compact non-shifting set-up by the automatic tight-locking rings. Cool running and long wearing, buffs feature regularly spaced pleats securely held by steel gripper teeth. Adjustable controlled ventilation is possible with air vent plates which fit into flanges. Made by **American Buff Co.,** 2414 S. La Salle St., Chicago 16, Ill.



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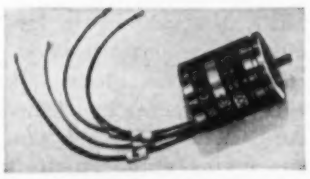
MINIATURE SERVO MOTOR in frequencies from 60-400 cycles



Line of miniature precision servo motors which measure 1-in. diameter by slightly over 1-in. length is available for frequencies varying from 60 to 400 cycles and in two, four, or eight-pole construction. Stall torque ranges from 0.25 to 0.35-oz-in. Output shaft can be supplied with or without integral pinion. Motors can be furnished to meet rigid military specifications relative to humidity, temperature, vibration and altitude. Made by **G-M Laboratories Inc.,** Dept. K, 4300 N. Knox Ave., Chicago 41, Ill.

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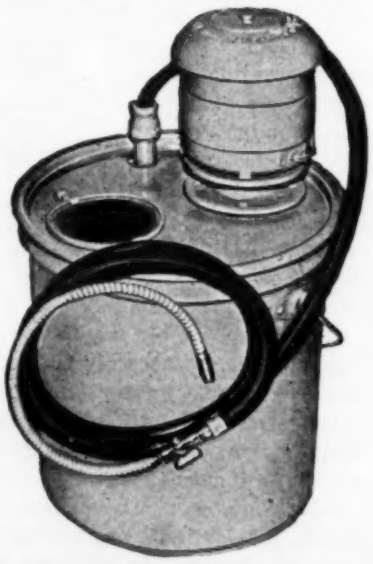
COOLANT PUMP 12 gpm capacity against 12-ft head

Machines not equipped with built-in coolant pumps can make use of model 8-5 medium duty unit which pumps 12 gpm against a 4-ft head or 5 gpm against an 8-ft head. It is self-contained and has a 1/15-hp G-E or equivalent motor of single bearing open type with splash shield. Centrifugal pump has full floating balanced impeller, no bearings, cast aluminum housing and is self-relieving under excessive pressure. Liquid coolant is drawn into pump from top and bottom, thus neutralizing thrust. Steel tank has a 5-gal capacity. Made by **Shellback Mfg. Co.,** 11831 Hamilton, Detroit 3, Mich.



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You can depend on

NAYLOR Here is your source for standard fittings for lightweight pipe, special fabrications to meet your specifications on simple or complex layouts, or fabrications of standard weight pipe. Specials range from 3" to 44" in diameter and wall thickness to ¼". All types of materials. Write for Bulletin No. 525.

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New York Office: 350 Madison Ave., New York 17, N.Y.

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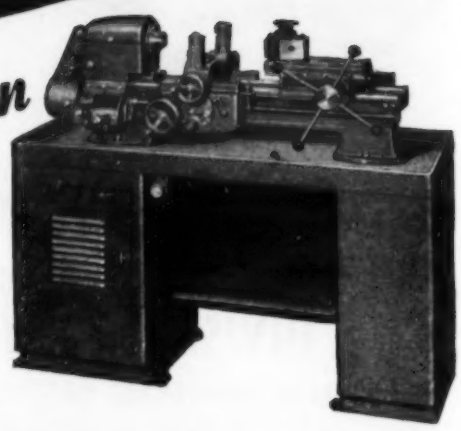
speaking of PRODUCTION...

Logan Delivers It!



No. 935-2 QUICK CHANGE GEAR TURRET LATHE
11" Swing
1" Collet Capacity
1⅜" Spindle Hole,
43⅛" Bed

METALWORKING PRODUCTION lines in many industries have found Logan Lathes the key to profitable operation. Set-ups are faster. Power cost is less. The sustained accuracy of the Logan ball bearing spindle holds close tolerances at high speeds. The rugged durability of Logan construction keeps production going at top efficiency and minimum cost per finished part. With their 11" swing, 1" collet capacity and 1⅜" spindle hole, rugged accurate Logan Lathes are standard tools on many of industry's most efficient production lines. Remember, as you plan for low cost production, no other lathe of comparable specifications can match Logan economy.

Write for the Logan Lathe and Shaper Catalog

LOOK TO LOGAN FOR BETTER LATHES AND SHAPERS
LOGAN ENGINEERING CO.
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- Meet Federal Spec. for impact and optical qualities.

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SPOT COOLING WHEN & WHERE YOU WANT IT

Reed PORT-O-VENT
PORTABLE AIR CIRCULATOR

Cat. No.	Air Cap. CFM*	Blade RPM	Motor #	Case Dimensions	Fan Weight
RUF-36 POV	9,250	350	1/3 hp	42"x42"x14½"	169 Lbs.
RUF-42 POV	11,000	354	1/3 hp	48"x48"x14½"	194 Lbs.

*Certified Air Deliveries #115v.-60cy., single-phase. Other type motors on special order.

Rugged, mobile man-cooler that puts plenty of air where it's needed. All-welded steel, swivel casters, heavy wire guards both sides, reversible, overload-protected motors. Powerful, six-blade construction, super-quiet.

Reed UNIT-FANS, INC.
1001 SAINT CHARLES ST., NEW ORLEANS, U. S. A.
WRITE FOR DETAILS TODAY

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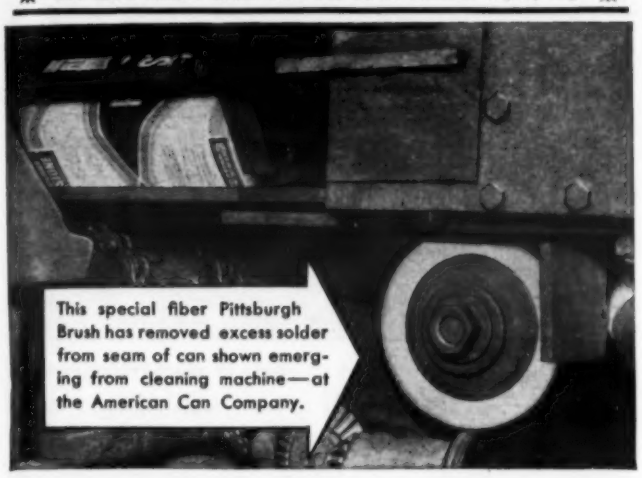


"Wouldn't be without them!"
say the men who use . . .

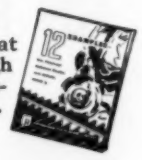
Power-driven Pittsburgh Brushes for longer life, better work!

Last longer, much safer—Cloth brushes formerly used at the American Can Co., Jersey City, to wipe excess solder from can seams lasted less than an hour, occasionally caught fire. Switching to special fiber Pittsburgh Brushes, American Can now gets better than 15 hours life per brush and the fire hazard has been eliminated. Supervisory personnel reports: "We wouldn't be without them!"

Last longer, do better job—In producing wall and ceiling panels, at the Barclay Manufacturing Co., New York City, dust caused by routing "mortar lines" settles on the panels, must be completely removed before panels can be bake-finished. Brushes originally used had a short life span, wore unevenly, and did so poor a job that many baked panels had to be completely refinished to pass inspection. Since even a "fairly good" brush would not do, Barclay searched for the "perfect" brush—and chose Pittsburgh! Result: Better work, and costly refinishing eliminated.

Last longer, better constructed—The Windalume Corporation, Kenvil, N. J., manufacturers of aluminum windows, uses Pittsburgh wire brushes to remove burrs caused by milling. The wire bristles on the brushes used formerly broke off easily. Windalume replaced them with Pittsburgh Brushes because they are better constructed—and Pittsburgh Brushes last longer!

WRITE TODAY FOR FREE BOOKLET!
Write today for a free copy of our booklet that shows, through actual case histories, how Pittsburgh can help cut *your* brushing costs. Address: PITTSBURGH PLATE GLASS COMPANY, *Brush Div.*, Dept. W-4, 3221 Frederick Ave., Baltimore 29, Md.

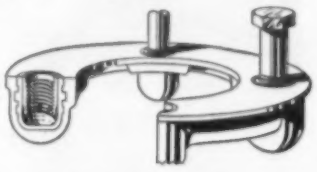


PITTSBURGH
Power Driven BRUSHES
BRUSHES • PAINTS • GLASS • CHEMICALS • PLASTICS • FIBER GLASS
PITTSBURGH PLATE GLASS COMPANY

For more details circle NED-656 D3 on enclosed inquiry slip

MOLDED-IN THREAD INSERT
usable in plastics and cast metals

Designed for molding in softer metal castings and in plastics parts, this steel threaded insert affords clean threads and extreme holding power. It consists of internal thread sizes of 10-32 or ¼-28, with or without the Rosan locking feature, which are furnace brazed into steel cap. Latter has two knurled flanges for torque resistance and large smooth flange to withstand axial loads. In tests, standard AN 10-32 bolts broke when 2900 to 3750 lb tensile loads were applied, and there was no movement of the molded-in insert. Made by **Rosan Inc.**, 625 Coast Highway, Newport Beach, Calif.



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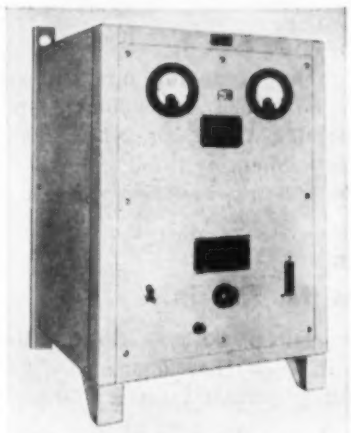
PLASTIC INSTRUMENT COVERS
are form fitting, acid-resistant

Durable, waterproof plastic film covers are now available made to specification for instruments or equipment of any size or shape. Covers protect against dust, dirt and the elements; are form fitting; and resist most acids. Plastic film pouches for small instruments which are carried around can also be made to order. Covers are made by **Blossom Mfg. Co.**, 915 Broadway, New York 10, N. Y.

For more details circle NED-658 D3 on enclosed inquiry slip

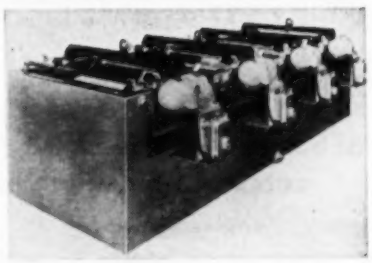
DIRECT CURRENT SUPPLY
electronic unit has good regulation



Usable in test, repair and communications laboratories, automatic regulated direct current thyratron power supply delivers 5 amp 110-v dc with 5-v tolerance. Input is 110-130-v 60-cycle ac. Manual adjustment is provided to return output voltage to standard regardless of variation of input. Included are direct current instruments and filter circuit to permit 1 per cent ripple. Air cooling allows operation at ambient temperatures up to 40° C. Made by **Richardson-Allen Corp.**, Dept. NED, 116-15 Fifteenth Ave., College Point, L. I., N. Y.

For more details circle NED-659 D3 on enclosed inquiry slip

SUBMERGED PLATING EQUIPMENT
assures uniform plating of work, high current density and fast action



Consisting of both barrel and plating tank, submerged barrel plating equipment is designed to produce consistently even finish, using high current density and fast plating action. All surfaces of work receive a uniform solution bath because no part of it can be exposed to the air while tumbling.

Barrel is hexagonal in shape, has an inside diameter of 14 in. and is available in 30 and 36-in. lengths with approximate capacities of 125 and 150 lb, respectively. Plexiglas barrels are recommended for all-round use in solutions up to 180° F and Melamine for temperatures to 210° F.

Barrel is suspended in plating solution on hanger arms which form an integral part of an angle iron frame traversing the top of the tank. Tanks are constructed of ¼-in. double electric-welded steel. Drive motor, including the speed reducer, is shelf-mounted at one end of the tank which is painted with rust protective gray enamel, trimmed with black. Vulcanized rubber or Koroseal lined tanks also are offered for use with acid solutions, and rubber covered hanger arms and plastic gears can be ordered for acid immersion. Made by **Hanson-Van Winkle-Munning Co.**, W. Church St., Matawan, N. J.

For more details circle NED-660 D3 on enclosed inquiry slip

Free BOOKLET ON
INVINCIBLE Flux Recovery Systems

• This illustrated booklet shows how Invincible Units are saving money by efficiently salvaging unfused flux on submerged arc welding jobs. Invincibles operate more rapidly and far better than any manual method. Also, by eliminating fine dust ("flour") from the salvaged flux, they reduce welding rejects. Invincible Units are compact, easily installed and able to withstand continuous operation.

Send for your copy of this booklet now!

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

For more details circle NED-661 D3 on enclosed inquiry slip

No. 150K SpeedWay SpeedSander KIT

Sands, Cleans, Rubs, Polishes—MOTOR-DRIVEN
3/16" ORBITAL-MOTION

No. 150 SpeedSander with powerful direct-connected, 3450 r.p.m. 110 v., A.C. air-cooled motor. No gears nor gear-housing to collect grit and dust. Sealed ball-bearings thruout. Cast-aluminum body and chrome plated—in hand weight only 5 lbs. Natural grip, all-position handle with sliding thumb switch and 3 wire rubber-covered cord. Handy, fitted, steel carrying case with accessories including: thick neoprene Contour Pad, steel Surfacing Plate, free abrasive Felts, lamb's wool Polishing Bonnet, 90 Abrasive Sheet Covers (18 each of 5 grits) and hardboard Template that cuts three 4½" x 6½" covers from standard 9" x 11" abrasive sheets.

$49.50 KIT COMPLETE

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1892 So. 52nd Avenue • Cicero 50, Illinois

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the amazing Crayons that tell temperatures

in
WELDING
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IN GENERAL

$2 each

gives up to 2000 readings

...it's this simple:
• Select the Tempilstik° for your working temperature.
• Mark your workpiece with it.
• The Tempilstik° will leave a liquid mark as soon as its specified temperature is reached.

Available in these temperatures (°F)

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125	225	325	500	900	1300	1700
138	238	338	550	950	1350	1750
150	250	350	600	1000	1400	1800
163	263	363	650	1050	1450	1850
175	275	375	700	1100	1500	1900
188	288	388	750	1150	1550	1950
200	300	400	800	1200	1600	2000

Also available in pellet and liquid form.

TEMPIL CORPORATION
11 West 25th St., New York 10, N. Y.

FREE—Tempil° "Basic Guide to Ferrous Metallurgy"—16¼" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____
COMPANY _____
ADDRESS _____

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New! Portable!

DEMING SUBMERSIBLE *Cellar Drainer*

Unit consists of bronze centrifugal pump having semi-open impeller of hard rubber and 1/3 H.P. motor with completely automatic switch sealed inside stainless steel motor case. No floats to adjust. Motor starts when water level raises the motor case. Solid bronze bottom base is surrounded by perforated brass strainer to provide maximum protection against refuse entering impeller. Entire unit can be fully submerged without damage. Capacity from 1200 to 3000 gallons per hour against respective heads of 22 to 5 ft. Pipe connections 1¼". Height 16". Will fit into 11" diameter sump. Shipping weight 44 lbs.

SEND FOR BULLETIN 4660
THE DEMING COMPANY
520 BROADWAY
SALEM, OHIO

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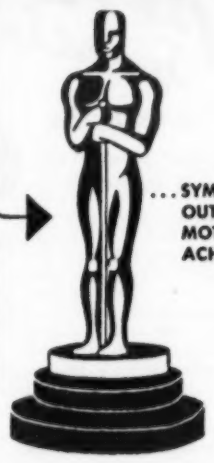
SIGNS IDENTIFY!



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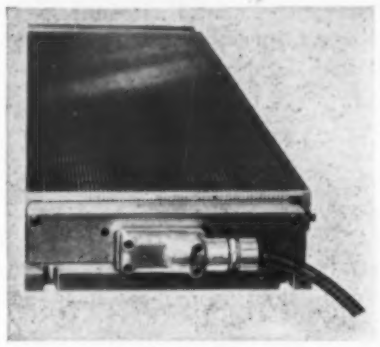
Dealers and Offices in Many Principal Cities

AT THE FRONTIERS OF PROGRESS YOU'LL FIND AIR REDUCTION PRODUCT

For more details circle NED-665 D3 on enclosed inquiry slip

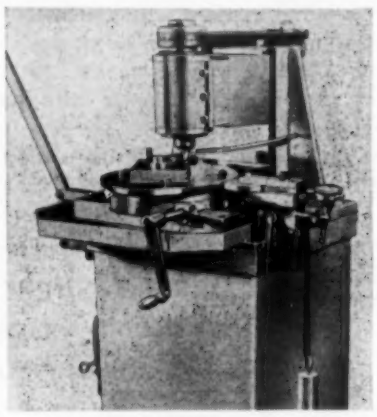
MAGNETIC CHUCK
holds parts with small contact area



Multiple poles for uniform, full work surface holding is featured by this Power-Grip magnetic chuck practical for holding large quantities of small thin parts having small areas of contact. Unit has closely spaced separators which consist of 0.050-in. wide brass separated by ⅛-in. wide mild steel spacer. Silver brazed construction results in rigid base for precision grinding. Made by **Sundstrand Magnetic Products Co.,** 1022 Ninth St., Rockford, Ill.

For more details circle NED-666 D3 on enclosed inquiry slip

PROFILE MILLER
produces irregular shapes quickly

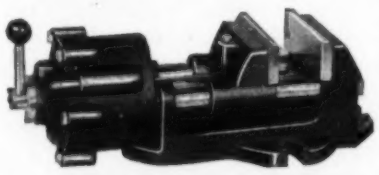


Irregular shapes, hexagons and geometric forms are produced readily with this Profile Mill. Cams and fixtures are built to customer's specifications. Use of maximum size cams reduces tolerances to a minimum. Eleven conventional milling operations are reduced to two rough and finishing operations. Dimensional relations are held to a single dimension tolerance. Made by **Spike Mfg. Co.,** Dept. NE, 24609 Middlebelt Rd., Farmington, Mich.

For more details circle NED-667 D3 on enclosed inquiry slip

AIR-POWERED VISE
5-in. jaw opens to 7½ in.

Because it has a pressure ratio of 20 to 1, the Smith quick-acting vise with 5-in. jaw that opens to 7½ in. develops 3000-lb holding pressure on a 150-psi air line. Sliding jaw is mounted on two large hardened and ground bars. A hand operating valve is built into the actuating cylinder, exhaust from pressure side of which returns the jaw. Speed controls adjust motion of the sliding jaw slow or fast to suit the job. Valve control lever can be attached to machine tools for automatic operation of the vise with return motion of the machine. Cylinder and valve are sealed from dirt and moisture. Distributed by **Sandersen Sales Service,** 3013 Dixwell Ave., Hamden 18, Conn.



For more details circle NED-668 D3 on enclosed inquiry slip

MESSAGE REPEATER
combination recording-playback unit

Safety messages, instructions, special service notices and other messages can be recorded for continuous or intermittent playback on the Message Repeater, a 6-lb self-contained unit. User speaks into a microphone which is part of the device and a talk, up to 2 min long, is recorded. New message is made on an endless tape while the old message is automatically erased. Machine can be activated manually or can be set off by photoelectric cell, pneumatic foot switch, time clock control or other device. Various messages can be prepared for one machine, as the recording tape in enclosed in an easily changed cartridge. Amplifier booster attachments and external speakers turn the unit into a public address system. Made by **Mohawk Business Machines Corp.,** Dept. G.F.R., 47 West St., New York, N. Y.

For more details circle NED-669 D3 on enclosed inquiry slip

FOSTORIA **LOCALITES** for Machine Tools, Assembly and Inspection Benches

Directs light exactly as needed as easily as pointing your finger

NEARLY A MILLION NOW IN USE

MODEL 3470-P-172
Overall length 48¼". Three instantly adjustable joints. Circular base for machine or wood screw mounting.

$7.16 EACH in package of 6
Single Units $8.95 Each

- **Rugged Construction** withstands vibration and rough handling
- **Instantly Adjustable** with flexible ball and socket joints
- **Reflector** accommodates 100 watt or any A-19 or A-21 medium screw base lamp
- **Baked Enamel Finish** — Exterior, smooth Gray — Reflector Interior, high temperature White
- **Wired Complete** with switch socket and 8-ft. oil-resistant cord and moulded plug

LOCALITE fostoria for Light ON the Job

Write for complete catalog of Localite models with various type reflectors, arms and bases for every industrial use.

THE FOSTORIA PRESSED STEEL CORPORATION
FOSTORIA, OHIO
Localites available through wholesalers everywhere

For more details circle NED-670 D3 on enclosed inquiry slip

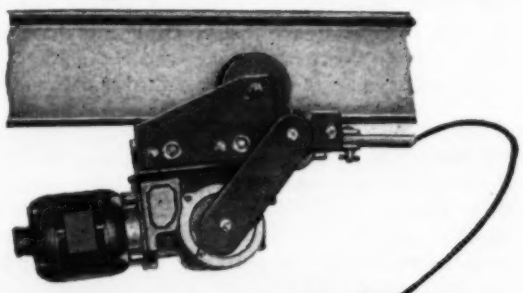
Get needed ventilation in all your buildings, no matter what type of roof

The Heat Valve meets modern ventilation needs — helps your buildings to *breathe*. Its design features short air travel with minimum friction. Compact design. Large capacity per square foot of opening. And it's *weatherproof*. Made in 10 standard throat sizes, 10 ft. lengths. Get the full story — write for Bulletin HV-C.

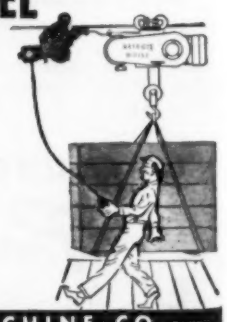
18511 Euclid Avenue, Cleveland 12, Ohio
The **Swartwout Co.**
Roof Ventilators and Ventilating Louvers
POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

For more details circle NED-671 D3 on enclosed inquiry slip

Simply Add
a *Trojan* TRACTOR



FOR POWER TRAVEL



The Trojan Tractor quickly converts slow, hand traveled hoists or small cranes and other handling units to fast, power travel; speeds up production. Simple drawbar attachment.

Ask for Trojan Tractor Bulletin 810

DETROIT HOIST & MACHINE CO.
48th year: Designers & Manufacturers Since 1905
8236 Morrow St., Detroit 11, Mich.

For more details circle NED-672 D3 on enclosed inquiry slip

RIVETT OFFERS 28 MODELS IN NINE BORE DIAMETERS

For pressures up to 150 P.S.I. Available in 7 standard mountings: in any length stroke to 96"; single or double end rods, with internal or external thread; cushioned either end or both. Keeper rings hold ends together—eliminate tie rods, and permit covers to be rotated to fit convenient pipe locations.

Rivett Lathe & Grinder, Inc., Brighton 35, Boston, Mass. Dept. NED-4

Write For Catalog 55. Shows specifications, drawings of Rivett Air Cylinders.

RIVETT furnishes a complete power package

VALVES • CYLINDERS • POWER UNITS

For more details circle NED-673 D3 on enclosed inquiry slip

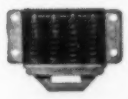
Catches and Fasteners for every need!

Bassick, world's largest maker of casters, also makes all kinds of catches and fasteners . . . either "standard" or adapted for your special needs by Bassick engineers working with you.

Write for Specialty Hardware Catalog of our extensive line, or send your problem. THE BASSICK COMPANY, Bridgeport 2, Conn. *In Canada:* Belleville, Ont.

Combination Latch-Hinge (ZLA-1020, ZLA-1009)
Note this versatile application! Clamps on one side are hinged . . . clamps on other side are opened. But box can be opened from either side and lid removed by unlocking all four fasteners.

"Power-Pack" (ZLA-1104)
Back view shows springs, compressing 100 lbs. of tension . . . the reason why this clamp won't loosen. Easy to open even in sub-zero temperatures



Back View

Heavy-Duty Hood Fastener (C-4017)
"Catching" vehicle hoods is but one of the many uses for this fastener, which provides a dependable, economical "hold", yet allows easy access to encased units. Many sizes and styles.

Flush Type Clamp Assembly (ZLA-1098)
Fully recessed to allow close stacking of articles on which they're installed. Spring-loaded arm works easily and grips the latch firmly. Hole for inserting padlock or shipping seal.

Bassick A DIVISION OF STEWART SW WARNER

MAKING MORE KINDS OF CASTERS . . . MAKING CASTERS DO MORE

For more details circle NED-674 D3 on enclosed inquiry slip

Over 85% of the torque wrenches used in industry are

Sturtevant TORQUE WRENCHES

Read by Sight, Sound or Feel

- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

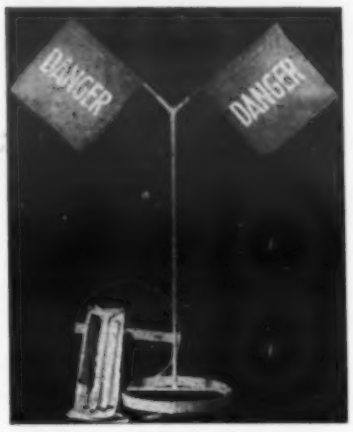
in inch ounces . . . inch pounds . . . foot pounds
(All sizes from 0-6000 ft. lbs.)

Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. STURTEVANT CO. ADDISON QUALITY ILLINOIS

For more details circle NED-675 D3 on enclosed inquiry slip

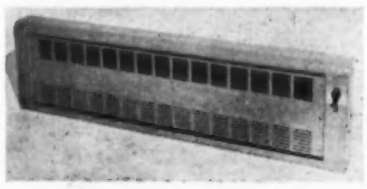
SAFETY FLAG STAND
protects workmen on the job



Two red danger flags are held at eye level to approaching drivers of vehicles by this McGard Y-type flag holder. Easily repaired or replaced standard steel pipe upright has hole for holding fusee flare. If hit by vehicle, upright shears off at base and can be rethreaded or replaced. Unit, painted yellow for high visibility, can be disassembled without tools and fits into compact canvas bag for carrying or storage. Made by **Charleston Rubber Co.**, 154 Stark Industrial Pk., Charleston, S. C.

For more details circle NED-676 D3 on enclosed inquiry slip

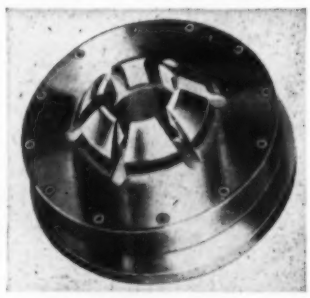
BASEBOARD HEATING UNIT
electric type heats by convection



A fin type heating element is employed by this Circle Air electric baseboard heating unit which is self-contained and ready to install. Air is warmed evenly and circulates through room by natural convection. Unit is available in three models, all 10 in. high and 3 in. deep. Lengths are 28, 36 or 48 in. All models can be recessed into baseboard or installed standing free from wall. They can be equipped with built-in single-pole thermostats. Ratings for the three models are 700, 1050 and 1400 w. Operation is on 115 or 230 v. Made by **Paley Mfg. Co.**, 244A Herkimer St., Brooklyn 16, N. Y.

For more details circle NED-677 D3 on enclosed inquiry slip

AIR OPERATED CHUCK
diaphragm unit holds work securely

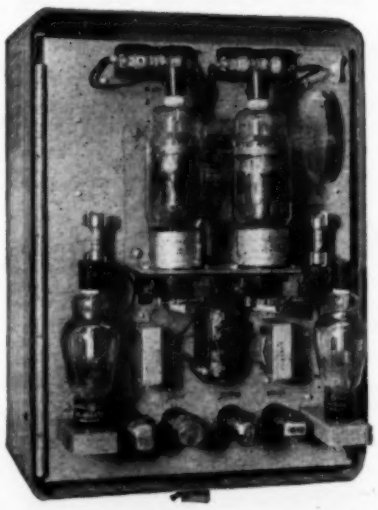


Simple booster assembly within self-contained air cylinder of this air-operated diaphragm chuck develops high thrust to hold work securely. Stepped up power permits use of heavy diaphragm for high torque and accurate repeatability. Design also contributes to compactness and light weight. Full jaw opening is assured regardless of line pressure fluctuations. Stops prevent distortion of diaphragm. Made by **Sheffer Collet Co.**, Bay & Wayne Sts., Traverse City, Mich.

For more details circle NED-678 D3 on enclosed inquiry slip

ADJUSTABLE SPEED DRIVE
designed for ¾ to 3 hp drives

Stepless and preset speed control and close speed regulation are given to ¾ to 3-hp drives on various types of machinery, conveyors, pumps and machine tools by the Thymo-trol packaged electronic adjustable speed drive. New small unit is offered in standard speed ranges of 5:1 and 20:1, has a drive panel measuring 15 x 18 x 12½ in. and comes in both reversing and nonreversing forms. Dynamic braking and standard overload and undervoltage protection are incorporated. Speed selection is by turning a single knob, with motor accelerating to and holding any preset speed within plus or minus 3 per cent, regardless of normal load changes. System operates on 220/440 v, single phase, 50/60 cycles. Made by **General Electric Co.**, Schenectady 5, N. Y.



For more details circle NED-679 D3 on enclosed inquiry slip

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Listed by Underwriters Laboratories

- Pump Controls
- Duplex Pump Alternators
- High and Low Level Cutoffs
- High and Low Level Alarms
- Multi-Level Signals
- Liquid Metering
- Special Controls and Panels

CHARLES F. WARRICK CO.
1962 W. Eleven Mile Rd.
Berkley, Mich.

Warrick FLOATLESS LIQUID LEVEL CONTROLS ELECTRODE TYPE

For more details circle NED-680 D3 on enclosed inquiry slip

USE JOMAC® GLOV-SAFERS

Use them on bare hands or over gloves. They provide sure hand protection in hundreds of different jobs, reduce pilferage, add life to all gloves. Write for descriptive catalog and samples.

AVAILABLE IN A NUMBER OF DIFFERENT STYLES, AND WITH GREASE AND OIL RESISTANT HYCAR RUBBER BACKING

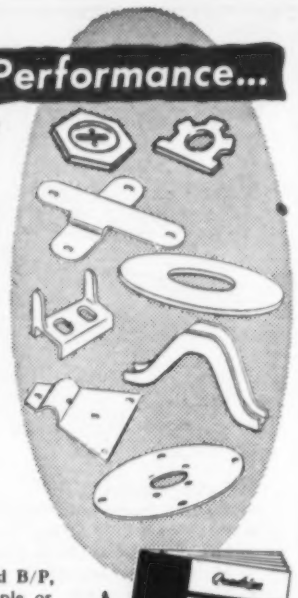
C. WALKER JONES CO. • PHILADELPHIA 38, PA.

For more details circle NED-681 D3 on enclosed inquiry slip

Insure Product Performance...

use Quadriga® STAMPINGS and WASHERS

Parts Assembly Work



Build long-lasting, quiet and dependable performance into your products. Specify Quadriga Stampings, Washers and Assembled Parts. Custom-fabricated to your exact specifications, Quadriga quality is your insurance against vibration, noise and resultant wear.

Stampings of all types. Tension, spring, formed, cupped or finishing washers . . . all materials. Wire terminal washers. Parts assembly work. Press capacity to 150 tons . . . depth of draw to 4 in. We build dies.

Send B/P, sample or data for estimate. Ask for new illustrated catalog.

THE QUADRIGA MANUFACTURING CO.

221 West Grand Avenue, Chicago 10, Illinois

For more details circle NED-682 D3 on enclosed inquiry slip

HOW TO SELECT THE *RIGHT* MOTOR AND CONTROL FOR YOUR JOB

Name your motor and control need . . . a-c or d-c, from 1 to 700 hp . . . this book has the answers! Gives requirements to consider before selection. Features comprehensive chart, teaming the right motor and control to the right job.

Introduces Westinghouse motor and control features—tells what they mean to you . . . shows modifications and accessories available and explains how they add life and versatility. It's a valuable selection guide with a storehouse of facts. Write for free booklet, Motor and Control Selector Guide, B-5458, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.

J-21687

YOU CAN BE SURE... IF IT'S Westinghouse MOTORS and CONTROLS

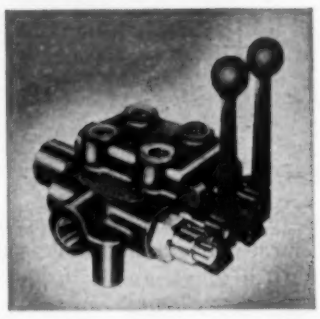
For more details circle NED-683 D3 on enclosed inquiry slip

MULTIPURPOSE TOOL
bores, counterbores, faces and taps

By combining boring, counterboring and facing blades with conventional tap chasers in this 7-in. ALT tap head, workpiece is finished with single chucking. It is bored, counterbored and faced with the tap chasers collapsed. Upon completion of this operation, tap is withdrawn from work and chasers expanded. Thread is then tapped on surface previously bored. Leadscrew feed is recommended for operations. Made by **Landis Machine Co.**, 40 E. Fifth St., Waynesboro, Pa.

For more details circle NED-684 D3 on enclosed inquiry slip

HYDRAULIC CONTROL VALVE
handles pressures up to 1250 psi



All types of hydraulic machinery can be controlled with this multi-control hydraulic valve. It is designed to actuate two double or single acting cylinders or a combination of one of each. It is fully balanced and self-centering, with built-in relief valve which is adjustable for pressures from 20 to 1250 psi. Additional features are replaceable hardened seat in relief valve, tripod mounting, hardened and chrome plated spools, and capacity of 24 gpm. Made by **Gre-Sen Mfg. Co.**, 630 N. Colfax Ave., Minneapolis 11, Minn.

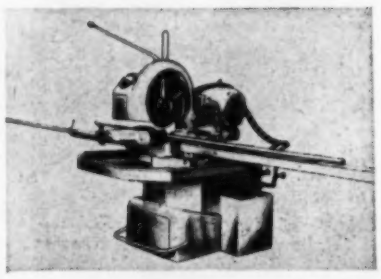
For more details circle NED-685 D3 on enclosed inquiry slip

WHEEL BLOCK
is heavy duty for truck or trailer

Features incorporated in cast alloy steel truck and trailer wheel block for safe holding under adverse conditions of grade and load include steel gripper teeth on bottom plate which prevent slipping even on ice or snow. Cast-in holes on bottom plate allow nailing block to freight car or truck floors and shipping platforms. Wide curved tread plate gives maximum tire contact and assures safe load distribution. Heavy center rib support affords strength to resist maximum thrust and has cast-in hole for attaching hook or chain. Owner's name can be cast on bottom plate for identification. Made by **Calumet Steel Castings Corp.**, 1650 Summer St., Hammond, Ind.

For more details circle NED-686 D3 on enclosed inquiry slip

CUT-OFF MACHINE
cuts without burr, fraze or burning



Nymonics, Nilo, R.R. and boron carbide as well as other hard metals are easily cut without burr, fraze, burning or hardening by line of Ballinger high speed eccentric head, hydrosurge cut-off machines. Seven times greater wheel life, cut smoothness equal to a ground surface and parallelism of plus or minus 0.005-in. are advantages reported for these machines. Standard units are powered by 15-hp motors driving the eccentric and main shafts through pulleys, and are fitted with 14-in. diameter abrasive wheels. Models for dry as well as wet cutting are available. Pressure with which work is fed is visually determined by operator with help of color coded indicater provided on the machine. Distributed by **Douglas Export-Import Corp.**, Ballinger Div., Dept. 14-5, 17 Battery Pl., New York 4, N. Y.

For more details circle NED-687 D3 on enclosed inquiry slip

Write us when you need Unusually Large Cap Screws

Cleveland catalogs "larger than usually listed" sizes of hex head Cap Screws — makes for you whatever you need up to 2½" diameter, lengths to 36". Write for sizes and prices.

Also extra large Flat Heads—up to 1" diameter, and Set Screws to 1½" diameter.

CLEVELAND *Top Quality* FASTENERS

The Cleveland Cap Screw Company

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Warehouses: Chicago, Philadelphia, New York, Providence

ASK YOUR JOBBER FOR CLEVELAND FASTENERS

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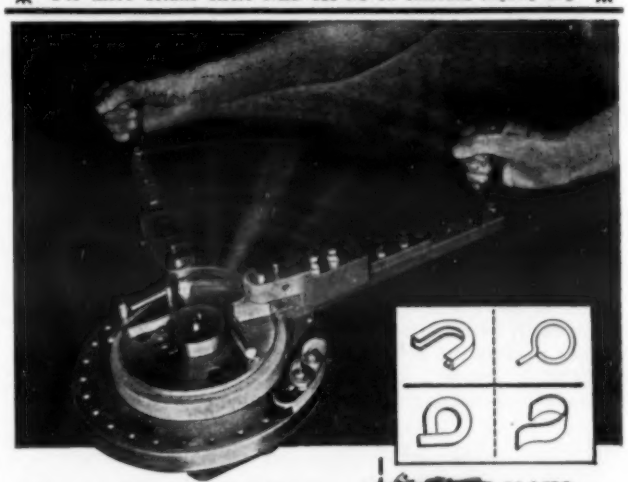

Bend a Variety of Materials

Accurately, Easily, Quickly with a versatile DI-ACRO* BENDER

Simple and complex bends can be made in ductile materials. Capacity of five hand models is from 1/16" wire to 1" round mild steel bar. Tooling is available for most forming requirements in solid materials and tubing, also many special accessories.

WANT MORE INFORMATION? *Send for New 32-Page Catalog*

*Pronounced Die-ack-ro

DI-ACRO HYDRA-POWER BENDER

A universal hydraulically operated bending machine that is equally as flexible as hand operated machine. Di-Acro Hydra-Power Benders are especially designed for those long runs and heavy bending operations which are impractical for manually operated equipment.

O'NEIL-IRWIN MANUFACTURING CO.

354 8th Avenue • Lake City, Minn.

di-acro PRECISION METALWORKING MACHINES

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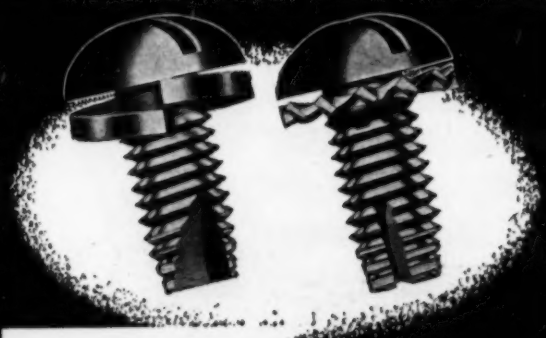
ELIMINATE TAPPING COSTS!

USE RELIANCE "THREAD-CUTTING" SPRINGTITES and SEMS



Available for stainless and sheet steel, die-castings and plastics

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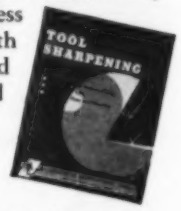
The PROFILOMETER helps you get

90% to 800% MORE PIECES PER GRIND

from cutting tools of all types!

WELL-KNOWN COMPANIES report *tool life increased 90% to 800% and more*—simply by smooth-finishing the tool faces after sharpening. This same smooth-finishing also enables the tools to produce a *more consistent finish* on the work.

These benefits usually require grinding or lapping the tool faces to a finish of 1 to 5 microinches. A difference of a few microinches makes a big difference in performance. Therefore, to make SURE, many companies *specify* microinch roughness of tool surfaces, and *measure* it with the Profilometer. The savings obtained far outweigh the little time required to make such measurements.



FREE BULLETIN L22 gives details. Write for it!

Profilometer is a registered trade name.

MICROMETRICAL MANUFACTURING COMPANY
345 S. MAIN ST. ANN ARBOR 9, MICHIGAN

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Morton Assured Quality and Service

FIXTURE CLAMPS & COMPONENTS

Immediate Delivery!

Largest assortment of sizes in the industry and backed by over 30 years of fine tool making. There's a Morton Fixture Clamp and/or Component to meet the most rigid requirements. Individual parts or complete assemblies. Economize with Morton by using them as STANDARDS.

WRITE TODAY

For Catalog containing full size templates of each product for tracing purposes.

MORTON MACHINE WORKS
2421 WOLCOTT STREET • DETROIT 20, MICHIGAN

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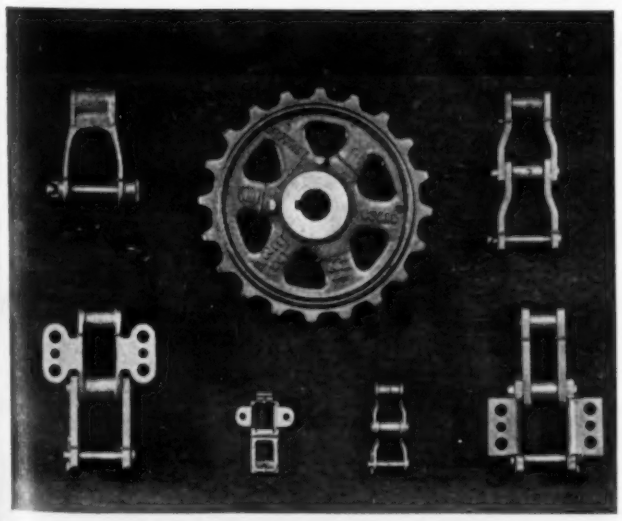
CHAINS and SPROCKETS



THE JEFFREY MANUFACTURING CO.
Columbus 16, Ohio

IF IT'S MINED, PROCESSED OR MOVED ...IT'S A JOB FOR JEFFREY!

sales offices and distributors in principal cities

For more details circle NED-693 D3 on enclosed inquiry slip

LIQUID CONTROL
shuts off after predetermined flow

Used in chemical and dairy plants, the Lucor Liquid Tender measures a preselected amount of liquid, such as water, milk and syrups, and then automatically shuts off. Selector dial determines flow of liquid from 5 minutes to 4 hours. Simple pushbutton restarts action again if needed. Tender is made of rustproof materials throughout, and does not employ gears or a clock. It can be used to replace solenoids in control of water flow in automatic washers. Made by **Luthe Corp.**, Dept. S7, 206 W. Washington St., Milwaukee 4, Wis.

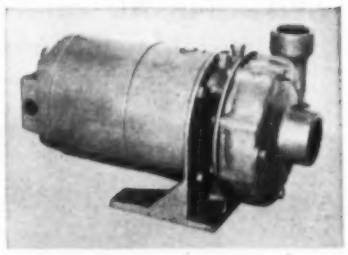
For more details circle NED-694 D3 on enclosed inquiry slip

NONSKID BAG
will not shift in transit

Coating applied to the Multiwall bag renders it skidproof, thereby preventing shifts in transit which often break bags. In one test it was found that the minimum slide angle for the nonskid bag on a tilting table was 42 degrees. Photo shows driver of a fork truck loaded with these bags applying the brakes with such force that the rear wheels are off the ground. Stack of bags on the fork leaned slightly, then settled back to their original position. Amount of coating is controllable so that any required nonskid characteristics can be built into the bag. Coating does not obliterate design and printing. Bags made by **Union Bag & Paper Corp.**, Dept. 3433, 233 Broadway, New York 7, N. Y.

For more details circle NED-695 D3 on enclosed inquiry slip

CENTRIFUGAL PUMP
delivers 110 gpm at 110-ft head



Compactness and ease of installation and servicing are features of Fig. 3642 close-coupled centrifugal pump for commercial and industrial use. It delivers up to 110 gpm at heads up to 110 ft and is powered by ¼ to 2-hp motors. Discharge outlets are tapped for 1 or 1¼-in. pipe. Single-suction, one-piece impeller, threaded directly on extended motor shaft, is balanced statically for smooth operation. Casing is split vertically for easy inspection and servicing. Discharge nozzle can be turned to any of eight positions. Size conversion is possible by merely changing the impeller and casing. Made by **Goulds Pumps, Inc.**, Dept. NED, Seneca Falls, N. Y.

For more details circle NED-696 D3 on enclosed inquiry slip

VIBRATION MEASURING INSTRUMENT
compact unit is self-generating

Continuous operation at 300° or as high as 500° F for intermittent periods of up to 100 hours is possible with type 4-118 vibration measuring instrument. Pickup measures only 1 x 1 in., weighs 1.3 oz and is designed for testing aircraft turbines, reaction motors and superchargers. It is self-generating, sending out electrical signals whose strength varies in proportion to vibrational velocity of object on which it is mounted. Signals can be read on meters or oscilloscopes, or recorded on oscillographs. Since pickup is insensitive to vibrations other than those directly along its axis, it can be used to isolate and measure movement in any one direction and mounts in any position. Made by **Consolidated Engineering Corp.**, Sierra Madre Villa & La Tierra St., Pasadena 8, Calif.

For more details circle NED-697 D3 on enclosed inquiry slip

GRIPPER WOVEN WIRE SLINGS!

TOUGH! You get the benefit of every ounce of sling strength in a basket hitch. Heat treated handles give extra strength. Transverse loop construction won't let sling body snap suddenly!

SAFE! Broad, flat sling body grips tightly around load in a choke hitch. Grips *entire* load securely, keeps inside members of tubing, rod or bar stock from slipping. Also, no broken wires stick out to cut operator's hands.

EASY TO USE! No kinking, tangling, snarling. Use any sling in either hitch. Use anywhere you have a stationary or portable hoist. Hangs out of the way when not in use.

SEE your industrial supply, materials handling or safety equipment dealer. Or write direct for name of nearest dealer and FREE ILLUSTRATED HANDBOOK.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

Department R
Cambridge 4, Maryland

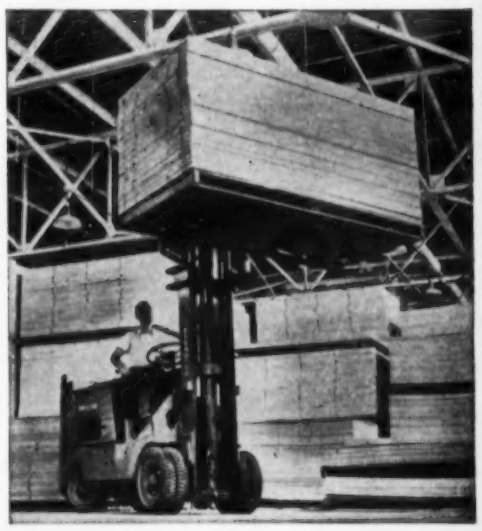
DEALERS! Write for information on territories available.

For more details circle NED-698 D3 on enclosed inquiry slip

B.F.Goodrich

TIRE AND WHEEL ANALYSIS

ANALYSIS speeds materials handling...cuts tire costs as much as 50%



● You can move more goods more efficiently at lower cost when your materials handling equipment rolls on tires of the right type, size, compound and tread design. But choosing the tires calls for a careful analysis of the kinds of equipment you use; where you operate—indoors or outside; your hauling surfaces; the kind of loads carried and any special conditions such as oily floors.

Such an analysis is a specialized, time-consuming job. That's why B. F. Goodrich offers you the Tire and Wheel Analysis Plan. Without charge or obligation, a trained BFG man will study your operations. He'll recommend the right tires for you to use. Perhaps you need a tire for better cushioning, a special cut-resistant compound, a tread design that gives better traction. Perhaps you have tire maintenance problems. Whatever your tire needs, your BFG man's recommendations will be impartial because B. F. Goodrich makes—and BFG retailers sell—a *complete* line of industrial tires.

To get full power from your industrial trucks and maximum service from your tires, send in the coupon or call your BFG retailer. A special TW Analysis Plan is available for manufacturers of industrial hauling equipment.

The B. F. Goodrich Co.
Department TW-247, Akron, Ohio.
Please send me:
☐ *Additional information* on your new Tire and Wheel Analysis Plan
☐ A free copy of your "Industrial Tire Guidebook".
Name _____
Title _____
Company _____
City _____ State _____

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

For more details circle NED-699 D3 on enclosed inquiry slip

Instant

HEAT

that's "QUICK-ON-THE-TRIGGER"
and "RIGHT-ON-THE-TARGET"

USE THE

WALL TRIG • R • HEAT SOLDERING IRON

READY TO SOLDER IN SECONDS

HEAT-CONTROL *Thermostatic Action guaranteed for the life of the iron, or double your money back!*

$11.95

Heat is QUICK! Just touch the trigger, and in seconds TRIG-R-HEAT is ready to solder.

Heat is RIGHT! Exclusive thermostatic action *(without fragile thermostats)*, quickly brings TRIG-R-HEAT to "on-the-target" soldering temperature and *keeps* it there. Built-in spotlight. Send for free catalog!

OVER 20,000,000 SOLDERING PRODUCTS SINCE 1864

WALL MANUFACTURING CO.
GROVE CITY • PENNSYLVANIA

▲ For more details circle **NED-700 D3** on enclosed inquiry slip ▲

How to Straighten Flap Tracks

This Dake Gap Type Press is used for broaching boring bars

Precision parts for aircraft call for the use of precision equipment.

These flap tracks, machined from 4130 steel (aircraft quality), must be checked on a straightening press four times during fabrication. For ease of control and accuracy, the work is done on Dake Gap Type Presses like that shown above.

To the right of the ram, the operator has placed a rule gauge which indicates ram travel. Knowing the elasticity of the piece being tested, he can estimate the overtravel necessary to straighten the piece with a single movement of the ram.

Dake Gap Type Presses are available for straightening or forcing, in 22 models ranging up to 300 tons capacity. They are fully described in Bulletin No. 299—sent on request.

DAKE PRESSES

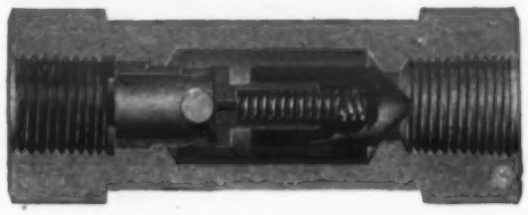
DAKE ENGINE COMPANY
642 Seventh St.
Grand Haven, Mich.

Arbor Presses · Hand-Operated Hydraulic · Power-Operated Hydraulic · Guided Platen · Gap Type Presses · Movable Frame

▲ For more details circle **NED-701 D3** on enclosed inquiry slip ▲

CHECK VALVE
for use in oil, air and water

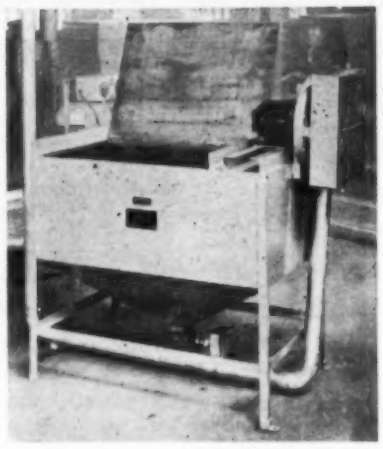
This improved check valve for use in oil, air and water lines with working pressures to 3000 psi affords minimum pressure loss at rated flow for a given line size.



One-piece aluminum body construction with nylon poppet reduces overall weight and assures leakproof service. Valve is available in ⅜, ½, ¾ and 1-in. pipe sizes. Made by **Waterman Engineering Co.**, Dept. NED, 725 Custer Ave., Evanston, Ill.

▲ For more details circle **NED-702 D3** on enclosed inquiry slip ▲

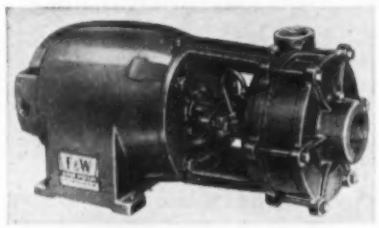
GRANULAR MATERIAL HOIST
pneumatic unit moves 30 lb/minute



All types of free-flowing granular materials such as thermoplastics are handled by this pneumatic hoist used primarily for filling high hoppers in injection and extrusion machines. Hopper loader feeds material at up to 30 lb per minute, carrying it 20 to 75 ft in any direction. Other capacities can be specified. Oblong bin holds approximately 800 lb of granules. Filters are used on both air inlet and outlet to prevent contamination. An air return or double pipe system can be used for dust-free feeding of powdery resins. Cyclone will fit in low-ceiling areas. Unit operates on 220-v, 60-cycle, three-phase current. Made by **Injection Molders Supply Co.**, 615-N Penton Bldg., Cleveland 13, O.

▲ For more details circle **NED-703 D3** on enclosed inquiry slip ▲

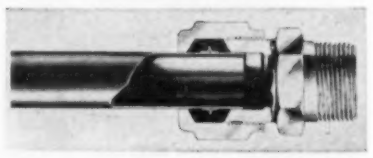
CENTRIFUGAL PUMPS
in single and two stage models



Line of high capacity one and two stage centrifugal pumps ranges in capacity up to 120 gpm at 15-ft suction head and 20 psi discharge using 1½ to 7½-hp single and three phase motors. They are designed for air conditioning and industrial service and can handle most types of liquids. Simplicity of design and ease of servicing are features. Pump and motor are integrally coupled and anchored to motor footing. Rotary seal can be provided in place of stuffing box for use where drip-free operation is required. Made by **Flint & Walling Mfg. Co.**, 909 N. Oak St., Kendallville, Ind.

▲ For more details circle **NED-704 D3** on enclosed inquiry slip ▲

PIPE & TUBE FITTING
is vibration and fatigueproof

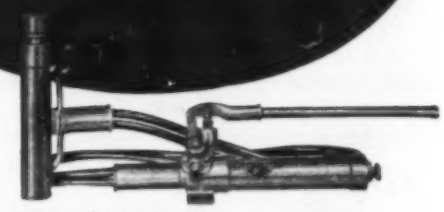


Sealastic metal tube or pipe fittings, which absorb shock and are vibration and fatigueproof, can be used on fuel, water, air and refrigerant lines under a broad range of temperature and pressure conditions. Fittings have no metal-to-metal contact and no flaring of tubing is necessary. Tightening the nut places the entire seal under compression, with the rubber ring acting as a cushion. Fittings remain leakproof even when moved through a 5-degree arc. Finger tightened fittings withstand pressures up to 4000 psi, and wrench-tightened fittings will sustain pressures beyond that of the tube itself. Temperatures from minus 70 to plus 400° F can be handled for special applications. Made by **Chicago Forging & Mfg. Co.**, Dept. N, 2005 Southport Ave., Chicago 14, Ill.

▲ For more details circle **NED-705 D3** on enclosed inquiry slip ▲

Applications unlimited

New HEIN-WERNER PUSH and PULL Hydraulic Jack meets the needs of the industrial user!



- moving • bending • pushing
- pulling • straightening
- lifting • lowering
- 4, 10, and 20 ton capacities

Write for Complete Catalog

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORPORATION
WAUKESHA, WISCONSIN

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SELF-LOCKING "PLACE" BOLTS

CUT COSTS... ADD STRENGTH

Wherever involuntary loosening or fatigue are a problem . . .

Wherever a locking bolt may be needed, the Slotted-Type "Place" Bolt offers not only positive locking action but economy and additional strength. It cuts costs because no additional parts or operations are needed. It adds strength because its controlled spring action guards against impact, shock and fatigue failures. National makes the Slotted-Type "Place" Bolt in carbon or alloy steel, in any of a wide range of sizes. Write us for additional information, including our illustrated folder.

FREE FOLDER

National PRODUCTS

THE NATIONAL SCREW & MFG. CO.
2440 East 75th St., Cleveland 4, Ohio

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The Wraps come off at the Show!

See it at Booth 258-358

Island has sold more unscramblers than all other makes combined.

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North, Long Island City, N.Y.

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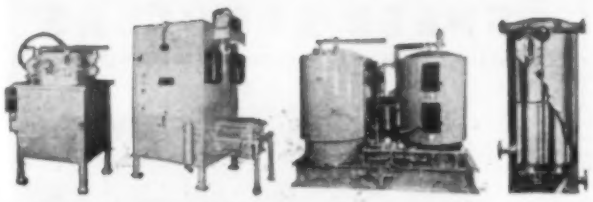
HILCO LUBRICATING AND INDUSTRIAL OIL MAINTENANCE EQUIPMENT

Saves You MONEY, OIL and MACHINERY



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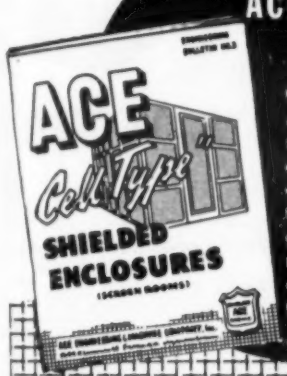
Write for ACE SCREEN ROOM GUIDE



Contains latest data on ACE shielded enclosures, an analysis of attenuation *versus* frequency measurement techniques, and suggestions for obtaining maximum shielded enclosure efficiency. Ask for Bulletin 3.

9 OUT OF 10

R-F SHIELDED ENCLOSURES (SCREEN ROOMS)

USED TODAY IN MEETING

EXACTING SPECIFICATIONS

JAN-I-225, 16E4 (SHIPS), MIL-I-6181 etc.

WERE MADE BY ACE

GUARANTEED to produce a minimum attenuation of 100 db from 0.15 to 1000 mc., and to closely approach this attenuation at 10,000 megacycles.

PRE-BUILT, ready to install. Easy to enlarge or to relocate.

CELL TYPE or single shielded rooms for any requirement.

USED by top-ranking military and civilian equipment producers and laboratories throughout the world.

ACE ENGINEERING & MACHINE CO., INC.

3644 N. Lawrence St., Phila., Pa. Telephone: REgent 9-1019

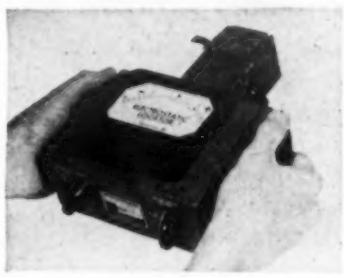
▲ For more details circle NED-710 D3 on enclosed inquiry slip ▲

AIRFOIL CENTRIFUGAL FANS
deliveries from 600 to 750,000 cfm

Wheel of this type A centrifugal fan is of the backward curve type with airfoil hollow sectioned blades. Operating efficiency in excess of 90 per cent adapts unit for high presure heating, ventilating and air conditioning service. Airfoil wheel is also quiet. Wheels are made in diameters from 12¼ to 132 in., and air deliveries range from 600 to 750,000 cfm at ⅛ to 16-in. static pressures. Made by **Chicago Blower Corp.,** 9869 Pacific Ave., Franklin Park, Ill.

▲ For more details circle NED-711 D3 on enclosed inquiry slip ▲

ELECTROSTATIC CHARGE DETECTOR
battery powered unit weighs 4 lb

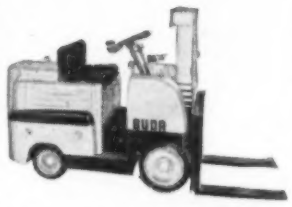


Amount of electrostatic charge on moving or stationary equipment or in materials in processing operations is indicated by type D electrostatic locator. Portable instrument weighs less than 4 lb and is powered by two standard 4½-v dry cell batteries and one standard flashlight cell. Full sensitivity is employed for general area inspection, while lesser ranges of 1/10 or 1/100 allow close examination without sending needle off scale. Parts likely to be affected by moisture and dust are sealed. Made by **Specialties, Inc.,** Dept. NED, Skunks Misery Rd., Syosset, L. I., N. Y.

▲ For more details circle NED-712 D3 on enclosed inquiry slip ▲

FORK LIFT TRUCKS
are diesel and gasoline powered

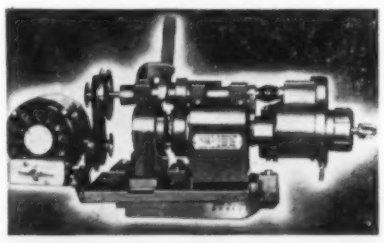
Five thousand pounds at 24-in. load center is rated capacity of model FTD50-24 diesel powered and FT50-24 gasoline or diesel powered fork lift trucks.



All side panels, rear and top of truck can be removed for quick accessibility to all parts. Both models have a 12-in. diameter industrial type clutch that can be changed in about 30 minutes. Other features are single lever full range gear shift, hydraulic brakes, self-aligning lift cylinder and availability with standard lifts of 72, 84, 108, 114 and 120 in. Trucks can turn in a 71-in. intersecting aisle. Made by **Buda Co.,** Dept. LF, 15440 Commercial Ave., Harvey, Ill.

▲ For more details circle NED-713 D3 on enclosed inquiry slip ▲

CIRCULARITY GRINDER
for tools with 2 to 12 flutes is attachment for tool grinders



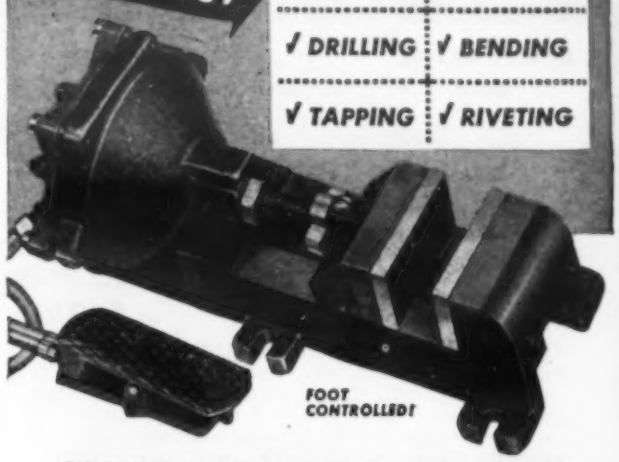
Simultaneous revolving and longitudinal back and forth movement of the work to be ground are provided by the direct gear drive of the model 500 circularity grinding attachment. Improved model has standard spacer gears with a follower pin for each flute to be ground, with provision for indexing 2, 3, 4, 6, 8 or 12 flutes. Special spacer gears can be furnished for other numbers of flutes. Number of back and forth movements per revolution of work is controlled by varying number of follower pins used in the spacer gear.

Attachment permits grinding of form relief, radial relief, form and radial relief together, tapered cylindrical and straight cylindrical contours. Cutting tool to be produced or reworked is held in collet or between dead centers and revolves on its own axial center. Made by **Detroit Reamer & Tool Co.,** 2731 E. Seven Mile Rd., Detroit 12, Mich.

▲ For more details circle NED-714 D3 on enclosed inquiry slip ▲

SPEEDY AIR VISE

SPEEDS UP ✓ MILLING ✓ PUNCHING ✓ DRILLING ✓ BENDING ✓ TAPPING ✓ RIVETING



GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and Fittings.....only **$29.90**

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W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

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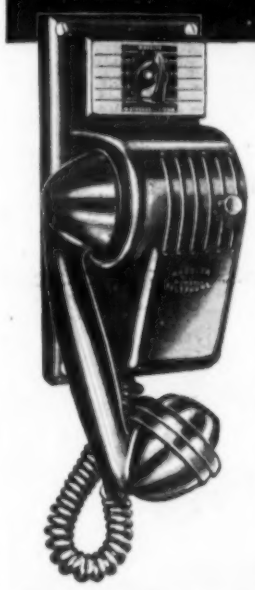
SOLVE THE PROBLEM OF **OVERLOADED** SWITCHBOARDS



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Up to 12 frequently-called locations on this dependable intercom system will save your overloaded switchboard for urgent calls . . . save both time and money. NO BATTERIES . . . NO OUTSIDE POWER . . . NOTHING TO REPLACE OR MAINTAIN. Free from electrical hazards. Ideal EMERGENCY standby. Meets many SPECIAL needs. Write now for full details.

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132 LAFAYETTE ST., NEW YORK 13

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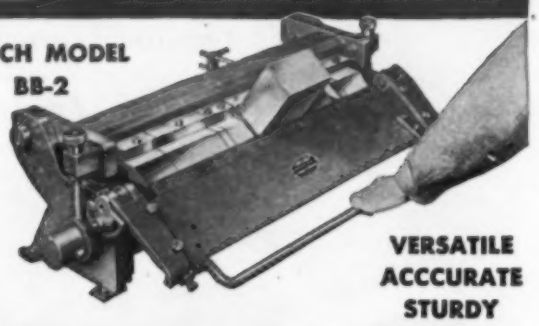
Bending Sheet Metal
UNIVERSAL BOX and PAN
CHICAGO BENDING BRAKE

BENCH MODEL
BB-2



VERSATILE
ACCCURATE
STURDY

This CHICAGO hand bending brake is ideal for bending sheet metal up to 18 gauge and 24" wide. Model and experimental shops, production departments find this machine unmatched for single pieces or production runs in folding, box and pan work, and a limitless variety of straight bending operations. Very little experience is required to do accurate and fast work.

Write for full particulars

Steel Bending Brakes for over 50 Years

4424

DREIS & KRUMP MANUFACTURING COMPANY
7436 S. Loomis Blvd., Chicago 36, Ill.
CHICAGO

For more details circle NED-718 D3 on enclosed inquiry slip

1/2 Ton Low Cost TRAVELLING CRANE

Lifts and moves up to 1,000 lbs., operates easily in close quarters, low enough to go into elevators, small enough to operate in aisles and through doors.

Moves and places machine assemblies, tote pans, waste drums; inexpensive substitute for travelling hoist. Features single unit hydraulic pump; no hose or couplings to fail. Lift height over 6 ft., also available in 1 and 2 ton capacities. Write for ½ ton Mobilcrane Bulletin. Lempco Products, Inc. (Industrial Division), Bedford, Ohio.

LEMPCO
MOBILCRANES
Also available in 1 and 2 TON MODELS

For 35 years a leading builder of machine tools

LEMPCO PRODUCTS, INC.
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Bedford, Ohio
Gentlemen: Kindly send Bulletin on
☐ ½ ton Mobilcrane;
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NAME_____
COMPANY_____
ADDRESS_____
CITY_____

For more details circle NED-719 D3 on enclosed inquiry slip

CONVEYOR WALK-OVER
designed to provide safe passage

Passage blocks and inaccessibility to areas above conveyor systems are eliminated with dual Safety step ladders equipped with a connecting walkway. Walkway can be folded up so that ladders can be used for normal applications when not needed to cross over conveyors. Standard size ladders are available for practically any height. One ladder has rubber-tipped legs for permanent or semipermanent installation. The other is equipped with casters for easy movement. Casters retract automatically when person steps on ladder so that rubber-tipped legs contact floor and prevent movement. Made by **Ballymore Co.**, Wayne 3, Pa.

For more details circle NED-720 D3 on enclosed inquiry slip

COPPER TUBE HANGERS
hinge allows assembly with one hand

Made of soft-temper steel, copper-plated to eliminate electrolytic action and protect tubing from corrosion and wear, these Berkshire tube hangers can be bent, twisted or formed around obstructions without distortion, cracking or loss of strength. Tensile strength is in excess of 1000 lb. Slot allows 1 in. adjustment up or down without removal of fastening nails, and hinge is designed for assembling hanger with one hand. Only one tightening screw is required. Hangars are made in ½, ¾, 1, 1¼, 1½ and 2-in. tubing sizes and drop lengths of 6 and 12 in. Made by **Armart Mfg. Co.**, 10 Wahconah St., Pittsfield, Mass.

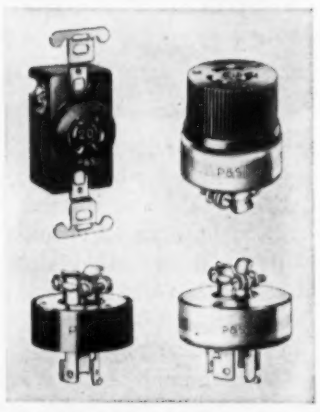
For more details circle NED-721 D3 on enclosed inquiry slip

CORROSION-RESISTANT TANKS
of glass fiber laminated plastic

Produced without molds, Laminex glass fiber reinforced plastic tanks can be fabricated to any size. They can be equipped with dam overflow and fittings. Smooth interiors and exteriors can be impregnated with various permanent colors. Sizes presently produced are up to 12 ft long or wide and up to 4 ft deep. Tanks are straight sided and square cornered. All joints are pressure bonded, and thickness is in proportion to required strength. Tanks withstand temperatures above the boiling point, are noncorrosive and electrically nonconductive. Walls of uniform thickness are reinforced with ribs, and material has high impact strength. Tanks are light in weight and easy to repair if damaged. Made by **Laminex Corp.**, 994-N Jefferson St., Fall River, Mass.

For more details circle NED-722 D3 on enclosed inquiry slip

LOCKING WIRING DEVICES
connection locks with turn of cap



Positive electrical connections can be made with line of P&S Turnlok locking devices made up of two, three and four-wire receptacles, caps and connectors with 10 and 20-amp ratings. Receptacles and connectors feature contour-controlled contacts and plainly marked ampere rating. The former, designed for easy back or side wiring, have two-piece bodies and plaster ears. Heavily armored caps and connectors with large head binding screws and ample wireways also facilitate quick wiring. Made by **Pass & Seymour, Inc.**, 50 Boyd Ave., Syracuse 9, N. Y.

For more details circle NED-723 D3 on enclosed inquiry slip

D.O.James
Established 1888

MOTORIZED GEAR SPEED REDUCERS
A CENTRALLY BALANCED DRIVE WITH GREAT EMERGENCY STRENGTH

Simplified assembly using standard flange motors, coupling connected with high speed pinion gear shaft, making for greater accessibility.

SINCE 1906 . . . When the first D.O.James Motorized Gear Speed Reducer was built . . . We have improved the design and manufacture of Motorized Gear Reducers, maintaining in them the same high quality of manufacture as our other standard Gear Speed Reducers.

The many advantages of D.O.James Motorized Gear Speed Reducers and their continued proven performance for many years make them a leading choice with power transmission designers and engineers.

D.O.JAMES GEAR MANUFACTURING CO.
MAKERS OF ALL TYPES OF GEARS AND GEAR SPEED REDUCERS
1140 WEST MONROE STREET, CHICAGO, U. S. A.

For more details circle NED-724 D3 on enclosed inquiry slip

28 COUNT'EM 28

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MASONITE PRESDWOOD
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- Smooth
- Grainless
- Great structural strength
- Resist moisture
- Resist weather
- Resist abrasion
- Resist chipping
- Resist many chemicals
- Won't split
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- Equal strength in two directions
- Easily laminated
- Won't rust or corrode
- Can be punched
- Can be drilled
- Can be sawed
- Can be routed
- Can be shaped
- Can be veneered
- Can be die-cut
- Can be bent
- Take and hold applied finishes

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DEPT. NED-4, BOX 777, CHICAGO 90, ILL.

"Masonite" signifies that Masonite Corporation is the source of the product

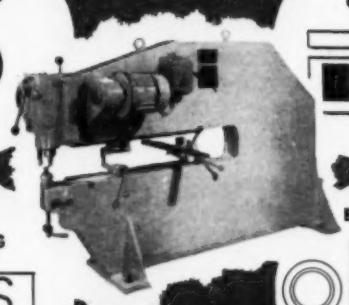
For more details circle NED-725 D3 on enclosed inquiry slip

PULLMAX Does all These Operations

SAVE TIME, LABOR & EXPENSIVE DIES

CIRCLE CUTTING

STRAIGHT CUTTING



SLOT CUTTING

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CHOICE OF 9 SIZES TO FIT YOUR REQUIREMENTS

FOLDING

From 16 ga. up to 11/32" capacity.

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MODERNIZE YOUR SHOP WITH PULLMAX
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AMERICAN PULLMAX COMPANY, INC.
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CLUTCHES by ROCKFORD

This Saw "Mows 'Em Down Even With the Ground"

The LITTLE GIANT Saw cuts down trees and stumps at any angle, bulldozes logs, bores post holes, propels itself anywhere a man can walk and loads itself on a truck. ROCKFORD CLUTCHES control power transmission in this versatile unit. Let ROCKFORD clutch engineers help solve your power transmission control problems.

B-W ENGINEERING MAKES IT WORK
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ROCKFORD CLUTCH DIVISION BORG-WARNER
312 Catherine Street, Rockford, Illinois, U. S. A.

For more details circle NED-727 D3 on enclosed inquiry slip

B&W BULLETIN TB-6F

Properties of Carbon, Alloy and Stainless Steel Tubing for High-Temperature and High-Pressure Service

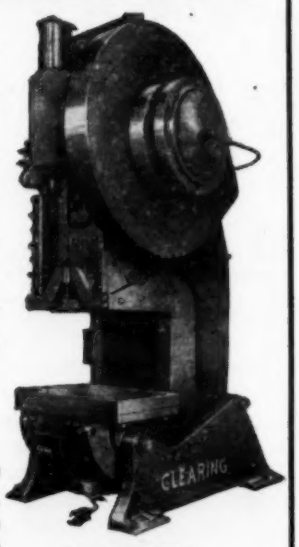
New data contained in the seventh, revised edition of B&W's Technical Bulletin 6F make it must reading for technical personnel concerned with the properties of tubing for high-temperature and high-pressure service. Bulletin covers a wide range of information on applications, grades and analyses of Croloys ½ through 9-M.

TA-1744 (P) *Write on your company letterhead, please.*

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa.—Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

YOU'LL GET MORE OUT OF A CLEARING O.B.I.

Greater accuracy of stamped parts, reduced die wear and lower final production costs are the lasting benefits a Clearing O.B.I. gives you. You get more because Clearing design and construction puts more into the press.



Details of Clearing O.B.I. construction are shown in cutaway drawings in this catalog. Write for free copy today.

Clearing 150 ton O.B.I. press

CLEARING MACHINE CORPORATION
6494 WEST 65TH STREET • CHICAGO 38, ILLINOIS

For more details circle NED-728 D3 on enclosed inquiry slip

COUNTING-WEIGHING SCALES handle up to 200 lb and serve as 50 to 1 counting equipment

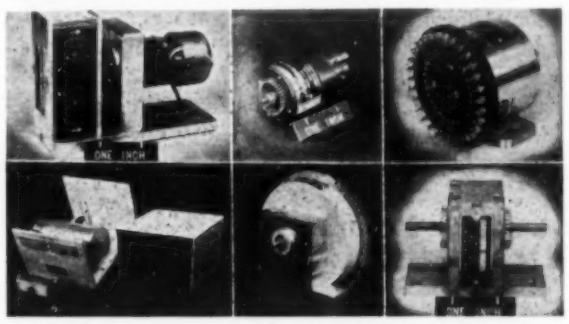
Of double duty type, Detecto-Gram scales 1742 and 1743 are adaptable for both counting and weighing operations. Both weigh up to 200 lb in straight weighing operations and have 50 to 1 counting ratio. No. 1742 is designed for counting in multiples of 50 only, but No. 1743 has special tray for increasing the ratio to permit counting of intermediate amounts. Using the pan alone gives the standard ratio of 50 to 1. When intermediate amounts are to be counted, a piece of work is put at the requisite notch on the special counting tray. Since this bar is notched at unit intervals, from 1 to 49, any count, odd or even, is obtained readily.

The number of pieces that can be counted in one operation is limited only by the capacity of the scale. Absolute accuracy is possible, since one small piece more or less than the correct amount is indicated immediately by the indicator moving off zero on the over-and-under dial. Made by **Detecto Scales, Inc.,** Dept. NED, 540 Park Ave., Brooklyn 5, N. Y.

For more details circle NED-729 D3 on enclosed inquiry slip

SAMPLING SWITCHES various multichannel types offered

Ascop high speed multichannel sampling switches, some models of which are illustrated, are available in a wide variety of switch designs to meet many and



diversified specifications. Sampling rates range from 1 revolution per day to 100 revolutions per second. Switch plates with as many as 240 contacts can be made, while special switch assemblies can have 1500 contacts. Units are made to operate on 2, 6, 12, 27.5, and 115-v ac or dc, with cycles up to 400 cps and are of two, three and four-pole design. Made by **Applied Science Corp. of Princeton,** P. O. Box 44, Princeton, N. J.

For more details circle NED-730 D3 on enclosed inquiry slip

Plastic Seal BETTER PACKAGING *at* LOWER COST!

Protects parts FROM RUST AND DAMAGE *while handling or shipping!*

Plastic Seal forms a skin tight coating that is moisture-proof and air-tight. Strongly resists shock and abrasion. Ideal for bulk shipments — requires less wrapping — reduces cost. Although Plastic Seal is tough it can be easily peeled. Transparency allows instant inspection and identification. Also available in colors for coding.

Write today for price information and free engineering service on production dipping problems.

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2023 Kishwaukee St., Rockford, Illinois

For more details circle NED-731 D3 on enclosed inquiry slip

For Portable
AIR COMPRESSORS
PUMPS • HEATERS
WELDING UNITS
CONCRETE MIXERS
SPRAYERS
SPREADERS

FAYETTE Precision Built UNDERCARRIAGES

EASY WAY TO CUT PORTABLE EQUIPMENT ASSEMBLY COSTS

By simply making the necessary bolt attachments, your trailer or portable equipment is ready to roll on a precision built Fayette Undercarriage. Strong tubular construction eliminates up to 40% dead weight.

Loads move easier, track truer, because of precision construction.

Save money three ways . . . Simpler installation of completely assembled unit. Longer life, trouble-free service. Lower initial cost.

Tell us your transport needs and our engineers will recommend a practical solution to your problem.

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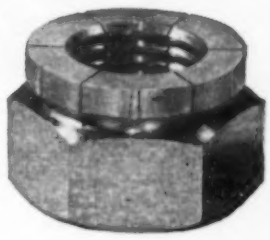
WRITE TODAY FOR COMPLETE SPECIFICATIONS

FAYETTE MANUFACTURING COMPANY, 400 FRONT STREET, FAYETTE, OHIO

For more details circle NED-732 D3 on enclosed inquiry slip

one standard FLEXLOC SELF-LOCKING NUT



covers temperature range to 550°F

Because they are all metal and require no auxiliary locking device, FLEXLOCS lock and stay tight even at higher temperatures. See your local industrial distributor for literature and samples or write SPS, Jenkintown 24, Pa.

Our Fiftieth Year : A START FOR THE FUTURE
FLEXLOC LOCKNUT DIVISION
SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-733 D3 on enclosed inquiry slip

a new high in . . . Safety

Dayton Safety Ladders, with exclusive "safety level" working platform, make high jobs "ground safe". Check the "big 6" features that make Dayton your best buy:

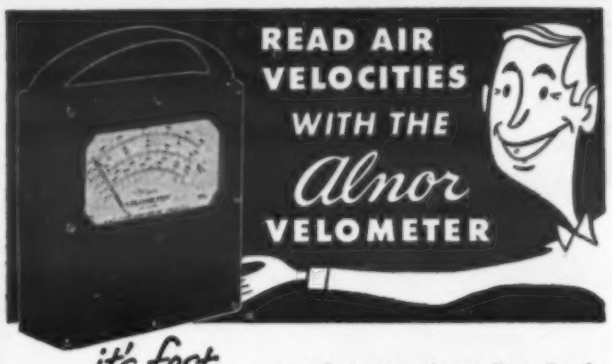
1. Rail-guarded "Safety Level" platform.
2. Locks in place automatically.
3. Rubber safety shoes.
4. Light weight—great strength.
5. Economically priced.
6. Complete size range 3' to 16' in height (to platform).

MAIL TODAY

Dayton Safety Ladder Co., Dept. E
2339 Gilbert Ave., Cincinnati, O.
Gentlemen: Please send free literature, prices, etc. on your Model A Safety Ladder.
Name_____
Company_____
Address_____
City_____ State_____

Dayton *safety ladder co.*
2339 Gilbert Ave., Cincinnati, Ohio
In Canada—Safety Supply Co.—Toronto

For more details circle NED-734 D3 on enclosed inquiry slip



it's fast . . . you get instant, precise readings directly from scale face . . . no need for reference charts or calculations. Measure air flow through ducts, grilles, motors, spray booths, etc., or in the open.

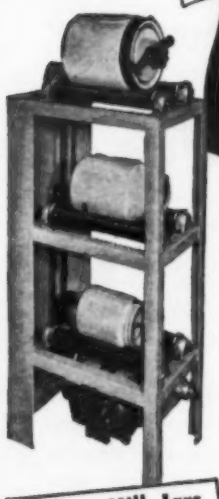
it's accurate . . . brings laboratory standards of air velocity measurement to the production line, mine, mill . . . anywhere. Needs no special care or handling . . . anyone can use it and get accurate results.

it's portable . . . completely self-contained, hand-held. Rugged construction and sturdy case protect the Velometer from usual hazards of portable use. Available in scale ranges to 24,000 f.p.m. Wide selection of jets and fittings assures adaptability of Alnor Velometer to your application. Get full details and prices, write for Bulletin 2448-G. Illinois Testing Laboratories, Inc., Rm. 529, 420 N. La Salle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-735 D3 on enclosed inquiry slip

Here's the *Best* in JAR MILLS



The "roller-type" JAR MILL with the patented "non-creep" rolls.

You don't have to continually watch a "U. S." *roller-type* jar mill — the jar stays put without clamping. Special patented rollers prevent jar creep; the jar stays centered.

"U. S." roller-type Jar Mills with the patented non-creep rolls are made in sizes to handle 1 to 24 jars. Adjustable to roll any round container from a pint to 6 gallon capacity.

Roalox Mill Jars

Positive Locking Wide Mouth Chemical Porcelain or stoneware. Quart to 6 gallon capacity.

WRITE FOR CATALOG

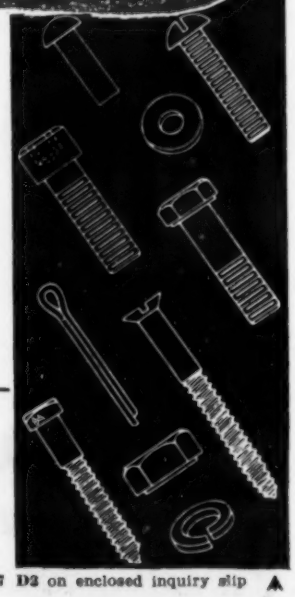
U. S. STONEWARE
Akron 9, Ohio

For more details circle NED-736 D3 on enclosed inquiry slip

STOP CORROSION with HARPER

EVERLASTING FASTENINGS
BY THE DOZENS OR BY THE MILLIONS

If you use fastenings of brass, bronze, copper, monel, aluminum or any stainless steel, you can get what you want from Harper. Over 7,000 items stocked—all backed by Harper's advanced metallurgists and skilled engineers. See your Harper Distributor.



HARPER
EVERLASTING FASTENINGS

The H. M. Harper Company
8212 Lehigh Avenue
Morton Grove, Illinois
Please send me Harper Catalog.

Name.....
Address.....
City.....*State*.....

For more details circle NED-737 D3 on enclosed inquiry slip

MACHINE-SIDE TOOL STANDS
with up to three trays and drawers

Trips to and from machine and tool stand are eliminated by this rigid machine-side stand which becomes integral part of machine itself. Joints are electrically welded for durability. Stands can have one, two or three trays and quick facing casters. Trays and legs are fabricated of ⅛-in. steel. Entire units are made in variety of sizes, without drawers, or with one, two or three drawers measuring 18 x 16 x 5 in. Shown is model 990-M with two trays and three drawers. Made by **Industrial Bench & Equipment Mfg. Co.,** 97-NED South St., New Britain, Conn.

For more details circle NED-738 D3 on enclosed inquiry slip

IMPULSE MOTOR
small unit has variable speeds

Instant stoppage as soon as current is shut off is feature of the Kasson Vibramotor, a small electric impulse motor with variable speeds. Built of steel with vernier speed control, it is suitable for applications where reciprocating and rotating elements must stop dead at predetermined points. Model AV with speeds variable from 1 to 250 rpm weighs 1½ lb and measures 2 x 4 x 5¼ in. Geared unit is offered with speed range of ½ to 80 rpm. Operation is on 110-v 60-cycle ac only. Made by **General Die & Stamping Co.,** 263 Mott St., New York 12, N. Y.

For more details circle NED-739 D3 on enclosed inquiry slip

BAGGING SCALE
for free-flowing materials

Semiautomatically operated Apex bagging scale for most types of free-flowing materials will handle from four to six 100-lb bags per minute. Design of improved model includes a combination bag clamp which is adjustable for 25 to 200-lb bags. Clamp is made to grip paper, cloth, burlap and other materials. Also featured are two-to-one leverage system, over-and-under indicator and dust evacuating shield. Attachment can be to any wood or metal hopper. Made by **Burrows Equipment Co.,** 1316-NE Sherman Ave., Evanston, Ill.

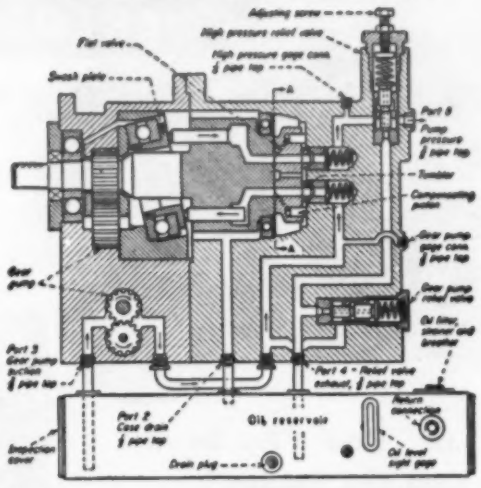
For more details circle NED-740 D3 on enclosed inquiry slip

ADDING MACHINE
is full-size, heavy-duty model

This full-size, heavy-duty, hand-operated adding machine which also subtracts and multiplies is practical where electric power is unavailable. Machine measures 14 x 9 x 7 in. and weighs 16 lb. It features rapid handle return for high work speed, and forward stroke is smoothly controlled against operator abuse. Other features are automatic space-up of totals and sub-totals for easy reading, handspan keyboard to accommodate any size hand, pyramid keys to minimize fingernail breaking, extra capacity key and rotary action for smooth, quiet performance. Prices begin at $135.00. Made by **Clary Multiplier Corp.,** Juniper & Thomas Sts., San Gabriel, Calif.

For more details circle NED-741 D3 on enclosed inquiry slip

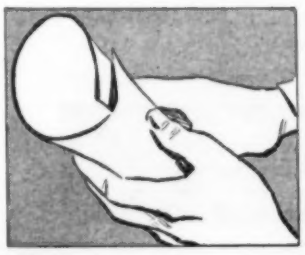
HEAVY DUTY HYDRAULIC POWER PUMPS
Pressures to 3000 & 5000 psi



The Oilgear Company announces three new "Fluid Power" heavy-duty constant delivery axial piston pumps. Similar components have been tested and proven in more than 100,000 installations without a single failure on record. Features of these fluid power generators are: patented balanced small flat valves with controlled oil film between working surfaces; patented small one piece rolling pistons; patented quiet reverse flow relief valves; 100% supercharge that minimizes oil compression, prevents air entry and assures quieter operation. These units in pressures up to 3000 and 5000 psi are especially suited to heavy duty pushing, pulling, lifting, lowering and maintaining high static loads on large clamping rams; for use in the iron, steel, metal working, plastic, automotive, rubber, printing, lumber and textile industries. For illustrated descriptive and application data, write for Bulletin 46601. THE OILGEAR COMPANY, Dept. A, 1582 West Pierce Street, Milwaukee 4, Wisconsin. *Advt.*

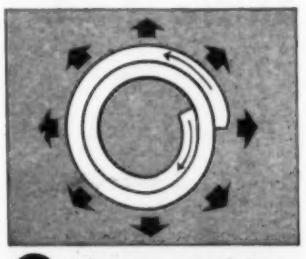
For more details circle NED-742 D3 on enclosed inquiry slip

SPIRAL SPRING COILS MAKE SPIROL PIN

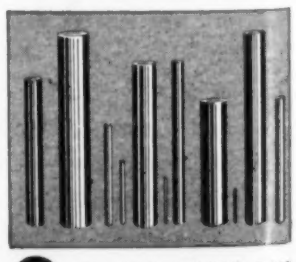


1 Roll a piece of paper spirally into a double coil. This is the way SPIROL PINS are rolled of steel or other flexible materials.

2 Compress roll and insert into circle of thumb and forefinger. Note "live action" as it expands to lock itself in circle. This is the SPIROL PIN principle.



3 When compressed by insertion, SPIROL PIN immediately develops evenly distributed radial tension, holding it firmly in place.



4 Standard SPIROL PINS from 1/32" to 1/2" diameters, and 1/8" to 4" lengths. Non-standard diameters, lengths & materials available on order.

The all-around tension provided by spiral coils gives SPIROL PIN unique fastening properties. Radial spring action locks SPIROL PIN in place . . . eliminates close tolerances . . . allows easy removal and reuse of pin. The design provides an infinite range of controlled variations in shock and shear resistance, insertion pressure, and flexibility.

FREE! Write for illustrated folder and sample SPIROL pins.

C. E. M. COMPANY
28 SCHOOL STREET • DANIELSON, CONN.

For more details circle NED-743 D3 on enclosed inquiry slip

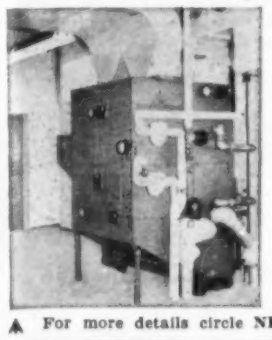
Control Atmospheric Conditions with Precision

•

Control of atmospheric conditions for tests and experiments, maintenance of standard conditions while working with hygroscopic materials, prevention of moisture damage to instruments or materials, improved drying processes . . . all are provided more easily and reliably with this new Niagara "Controlled Humidity" Method.

The equipment is simple, easily maintained and gives trustworthy, automatic operation. A liquid absorbent, "Hygrol", removes the moisture from the air directly so that refrigeration is needed only for sensible heat removal, saving equipment and operating expense.

Units provide capacities ranging from 1000 c. f. m. to 20,000 c. f. m. and require less space than conventional apparatus. Conditions are completely controlled at will in the temperature range from 34°F. to 140°F. and below 32°F. if required.



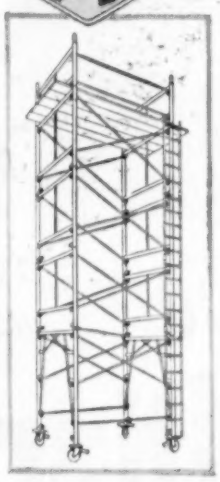
Write for Bulletin No. 112, address:

Niagara Blower Company, Dept. ED. 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle NED-744 D3 on enclosed inquiry slip ▲

ADVANCE SCAFFOLDING

• DESIGNED FOR SAFETY
• PRICED FOR SAVING



The versatility and safety features of ADVANCE tubular steel scaffolding means substantial savings in maintenance costs for owners and occupants of industrial, commercial and institutional properties. Patented Cam Locks and Stack Locks which are made an integral part of each panel or brace eliminate nuts, bolts and similar methods of attachment. This means speedy, one-man erection to any height and a solid, firm structure, rigid in all directions.

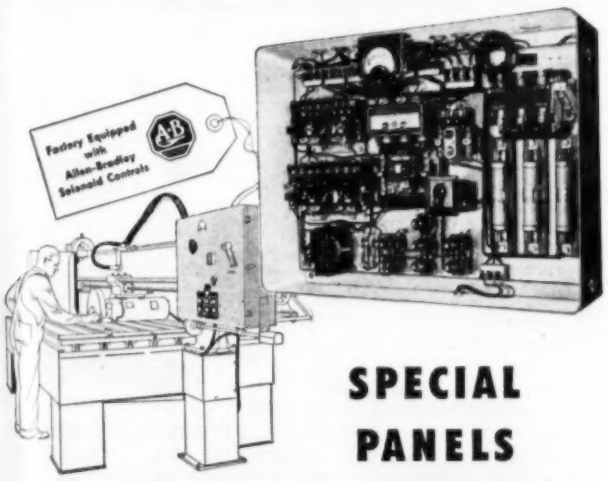
Get the facts about the economy, safety and convenience of ADVANCE scaffolding for advanced methods of building maintenance. Write direct for free literature, engineering and specification data.

BEAVER-ADVANCE products are distributed nationally through industrial and construction equipment dealers. Inquiries re distributorships are invited.

BEAVER ADVANCE

ADVANCE SCAFFOLD DIVISION
BEAVER ART METAL CORPORATION
ELLWOOD CITY, 2, PA.

▲ For more details circle NED-745 D3 on enclosed inquiry slip ▲



SPECIAL PANELS for SEQUENCE CONTROL

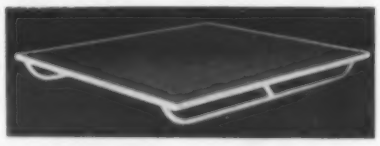
Any Size • Any Sequence • Any Machine

Allen-Bradley special control panels can be engineered to fit your particular machine. They can be designed for any sequence of automatic operation of motor driven machines. Such special panels, made by Allen-Bradley from standard components, provide correct sequence control, greater safety for operators, and lower installation and maintenance costs. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

▲ For more details circle NED-746 D3 on enclosed inquiry slip ▲

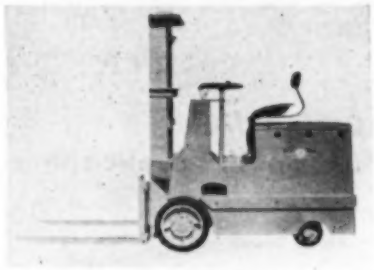
HEAVY DUTY PALLET made of tubular steel



Light in weight, this eight - entry tubular steel pallet is designed for heavy duty all-purpose use. It has two or more tubular skid runners welded and braced to a rectangular angle iron frame which encases and protects a laminated wood deck. Sled-like construction permits easy movement over uneven surfaces and allows compact stacking and easy handling. Made by **Econoweld Co.**, Dept. N, 1805 Webster St., Dayton, O.

▲ For more details circle NED-747 D3 on enclosed inquiry slip ▲

FORK LIFT TRUCKS nine battery operated models in line



Nine models are available in line of battery powered industrial fork lift trucks with 2000 to 4000 lb capacities and choice of 15, 20 or 24-in. load centers. Redesigned trucks use series-parallel wound, 32-v, 2400-rpm motors with ample overload capacity. Low amperage circuits actuate the magnetic controller, providing four speeds forward and four in reverse. Shifting is automatic. Other features include automotive type steering, hydraulic lift and tilt (10 degrees backward, 4 degrees forward) and welded steel frame. Made by **Wright-Hibbard Industrial Electric Truck Co.**, Station St., Phelps, N. Y.

▲ For more details circle NED-748 D3 on enclosed inquiry slip ▲

PRESSURIZED CONTAINER VALVE can use high solvency propellents

Flexible metal diaphragm and valve seat made of Nylon or Teflon allows this pressurized dispensing valve to be used with standard as well as high solvency propellents such as Freon 21 and 22 and methylene chloride. Valve produces soft spray-cloud of minute and uniform particles. Proximity of secondary orifice to terminal orifice minimizes clogging due to internal drying. Cutoff is quick and positive. Position of actuating lever makes spray direction immediately obvious. Protective overcaps are available in lithographed colors. Made by **Risdon Mfg. Co.**, Valve Div., Naugatuck, Conn.

▲ For more details circle NED-749 D3 on enclosed inquiry slip ▲

Warning!

Industrial skin accidents cause more lost time than broken bones

It just doesn't make sense to yell about safety in your plant and neglect occupational skin hazards from oils, acids and alkalis, which are among the most frequent and severe of all factory injuries. You're risking lost production, costly claims and good employee relations.

$147.00* — that's the average skin trouble treatment cost in some areas. If you've escaped it, you're lucky. And you know it doesn't pay to push your luck. It's real cost cutting to see that your people have protective clothing, especially gloves.

The complete line of 32 non-allergic PIONEER Stanzoil Gloves of oil-and-acid resistant DuPont neoprene are meeting every hand-skin hazard in hundreds of plants — at very low cost per hour. Don't take chances with dangerous occupational dematitis — write *today* for new Stanzoil catalog that shows you how to choose the safe economical glove for each job!

* *"Industry's Big Itch", "Occupational Hazards", December 1952.*

Industrial Products Division
The PIONEER Rubber Co. • 234 Tiffin Rd., Willard, Ohio
QUALITY GLOVES FOR 35 YEARS

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Now More Positive Protection than Ever Before with the New FLEX-A-FOAM FILTER MASK

Newly designed for maximum comfort and efficiency, it's easier to breathe through and talk through than an ordinary pocket handkerchief . . . yet filters non-toxic dusts as small as 1/25000 of an inch!

- Extremely light in weight—just one ounce complete.
- Self-adjusting to every face size—no interference with eye glasses.
- Simple sturdy design—only four interlocking parts.
- Only respirator made with long-lasting washable filter—outwears throw-away type as much as 100 to 1.

Sample $1.40 postpaid

Write for new descriptive folder

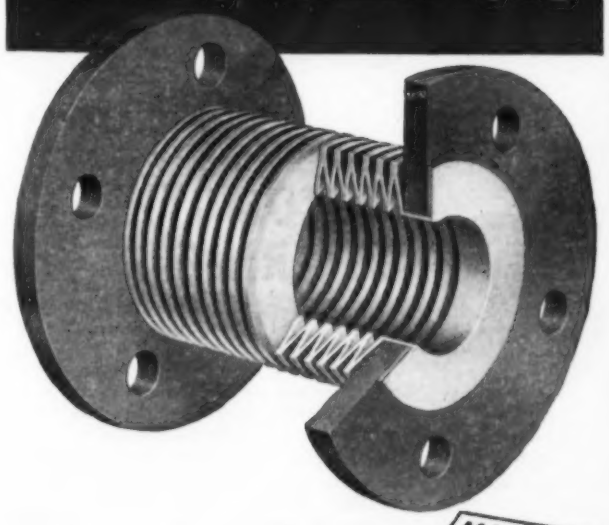
Dust Protection your workers will welcome and *Wear*

FLEX-A-FOAM FILTER MASK

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

▲ For more details circle NED-751 D3 on enclosed inquiry slip ▲

SAFE SEALS for Costly Chemical Piping



MADE OF TEFLON du Pont Trademark

Chemiseal Expansion Joints and Flexible Couplings

- Absorb shock, vibration, thermal expansion and contraction.
- Correct misalignment.
- Connect unlike piping ends and nozzles.
- Eliminate gaskets, adaptors, slip joints.
- Made of TEFLON — impervious to all chemicals except molten sodium and fluorine.
- Write for Bulletin FC-952

UNITED STATES GASKET COMPANY

FLUOROCARBON PRODUCTS DIVISION
CAMDEN 1, NEW JERSEY
Representatives in Principal Cities Throughout the World

▲ For more details circle NED-752 D3 on enclosed inquiry slip ▲

Make Your Own Hose Lines

Cut Costs
Reduce Inventory
Reduce Downtime

Aeroquip Hose and Fittings form a perfect combination that permits you to make hose assemblies that meet Aeroquip's standard of quality . . . the highest in the industry. No special skill or training is required. This "Aeroquip Idea" cuts costs, inventory and downtime.

Aeroquip

AEROQUIP CORPORATION, JACKSON, MICHIGAN

FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

▲ For more details circle NED-753 D3 on enclosed inquiry slip ▲

UNITED CARAVAN AXLES

feature

AUTOMOTIVE STEERING

Only CARAVAN axles assure dependable roadability on both highway and rough ground. These job-engineered axles are available in 2-wheel units and 4-wheel assemblies featuring automotive steering and controlled camber, tow-in and caster for positive trail at high speeds.

Stability for the heaviest loads is provided by massive center steering arm, extra-heavy center arm stop blocks and heavy-duty steering knuckle. Wide inside wheel turning angle assures maximum maneuverability and eliminates jack-knifing.

Write today for new Bulletin No. 53 for further information.
1124-UM

THE UNITED MANUFACTURING CO.
410 INTERSTATE STREET • BEDFORD, OHIO

▲ For more details circle NED-754 D3 on enclosed inquiry slip ▲

Foley Sharpened Saws CUT HIGH LABOR COSTS

Your saw operator's production jumps 25 to 40% when the saw he uses is sharpened on a New Model 61 Foley Automatic Saw Filer. His saw will cut faster, smoother, run cooler and *stay sharp longer.*

NEW MODEL 61 FOLEY AUTOMATIC SAW FILER

Prove it by 30 DAY TRIAL in Your Own Shop

Try the Foley Automatic Saw Filer for 30 days in your own shop. You'll be under no obligation. See how it sharpens your hand saws, band saws up to 4" wide and cross-cut circular saws 3" to 24" in diameter. Notice how the Foley Automatic Saw Filer automatically corrects uneven teeth caused by poor filing and restores them to even size, shape and spacing. You'll say the Foley Automatic Saw Filer is a "must" for every well run wood-working plant.

FREE BOOK TELLS HOW—The instruction book that goes with the Foley Automatic Saw Filer is yours for the asking. Here you can read how inaccuracies are eliminated through simple and positive adjustments. This book does a double job . . . helps you cut production costs with better cutting saws and shows you how to lower your saw maintenance costs.

FOLEY MFG. CO.
3323 N. E. 5th St. Minneapolis 18, Minn.
Please send instruction book and information on 30-day trial offer.
Name .....
Address .....

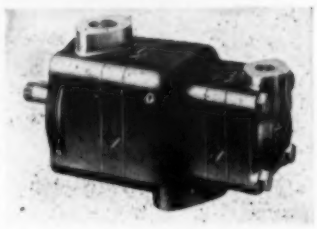
▲ For more details circle NED-755 D3 on enclosed inquiry slip ▲

ELECTRONIC NOISE DETECTOR is self-contained, portable unit

Noise sources in all types of mechanical equipment can be located readily with the Elec-Detec portable electronic instrument. It incorporates a milliammeter for checking sound impulses visually, as well as the standard headphones for audible operation. This combination permits user to "see" and hear the location of possible sources of trouble in bearings, pistons, gears, ratchet, cams, clutches and other moving parts. Features include stable germanium crystal diode which affords accuracy and wide frequency response. Made by **American Name Plate & Mfg. Co.,** Anco Instrument Div., 4256 W. Arthington St., Chicago 24, Ill.

▲ For more details circle NED-756 D3 on enclosed inquiry slip ▲

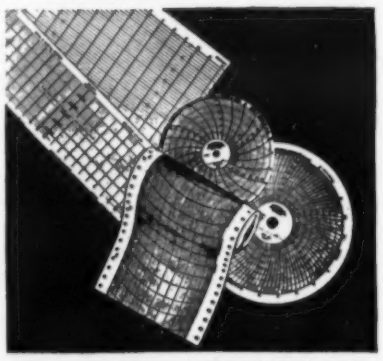
DOUBLE HYDRAULIC PUMP developed for mobile applications



Providing two independent sources of hydraulic power, series V-2200 and V-3200 double pumps are especially applicable for mobile equipment service. Both units are compact and each consists of two vane type pumps in single housing, driven by a common shaft. Features are balanced pressure design and automatic adjustment of both radial and axial clearances. Ten sizes of series V-2200 are available, with any combination of 2, 5, 8 or 11 gpm delivery units. Series V-3200 pumps are made in 16 sizes, with a choice of 2, 5, 8 or 11 gpm at small end and a 12, 15, 18 or 24-gpm pump at the other end. A choice of splined, threaded or straight keyed shafts and face, flange or foot mountings is offered. Made by **Vickers Inc.,** 1456 Oakman Blvd., Detroit 32, Mich.

▲ For more details circle NED-757 D3 on enclosed inquiry slip ▲

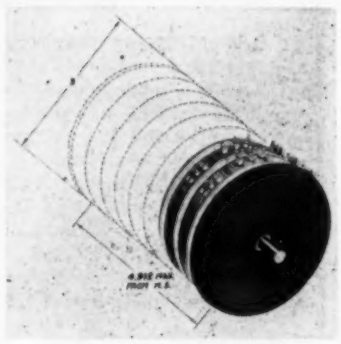
RECORDING CHART SERVICE supplies roll or dial types to order



Over 8000 precision cast printing plates are stocked by this company to provide ready source for all types of roll and dial type recording charts for industrial, laboratory, process and other uses. Chart paper is selected for each job requirement. Special charts can be made to order from wax-engraved plates. Chart service offered by **Technical Charts Inc.,** 193 Van Rensselaer St., Buffalo 10, N. Y.

▲ For more details circle NED-758 D3 on enclosed inquiry slip ▲

CONTINUOUS POTENTIOMETER phasing done by external ring clamp



Series of 360-degree, continuous rotation, 3-in. OD potentiometers includes model L with bushing mounting and sleeve bearings, model LS with servo lid mounting and Oilite bearings, and Model LSP with servo lid mounting and ball bearings. First two models with linearities of plus or minus 0.5-per cent in resistances from 10K to 100K ohms are stocked, while other versions with as high as plus-minus 0.1-per cent linearity (5K ohms and above) are made to order. Feature is easy foolproof phasing in the field by means of external ring clamp. In ganged assemblies of up to eight sections, each section can be phased independently. As many as 33 taps can be spotwelded in a single section. Double shaft extensions are optional. Made by **Helipot Corp.,** 916 Meridian Ave., South Pasadena 31, Calif.

▲ For more details circle NED-759 D3 on enclosed inquiry slip ▲

Floors reinforced with HEXTEEL® or FLOORSTEEL® LAST 25 YEARS!

No personal injuries, no spillage from trucks—due to defects in floors—when you reinforce with *Klemp's* patented floor armors! Even in 1978, there will be no ruts, pot-holes, cracks or other dangerous disintegration! Use *Klemp's* FREE engineering service—or write TODAY for "Instructions for Laying *Klemp* HEXTEEL and FLOORSTEEL." No obligation.

KLEMP
We Tread the World with Safety

KLEMP METAL GRATING CORPORATION
1371 North Branch Street • Chicago 22, Illinois

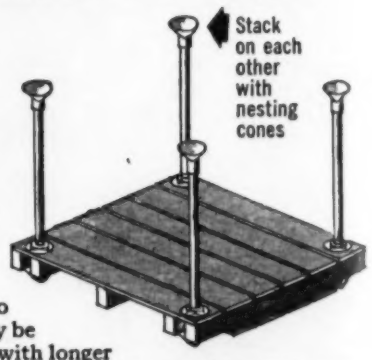
▲ For more details circle NED-760 D3 on enclosed inquiry slip ▲

Saves $15,000.00* per year...

with the flexible Paltier "TIERS OF RACKS"

***PALTIER USER** makes maximum use of cubic storage area—saves 15.2% of space—eliminates 6 stock handling people.*

PALLETIZE ALMOST ANYTHING— No waste of storage space—or man power



PALTIER SYSTEM STORAGE RACKS are engineered to palletize crushable, bulky, irregular shaped items—in minimum space—items that ordinarily could not be stacked on each other. Paltier racks are highly flexible—posts slip fit into sockets and can quickly be removed and replaced with longer or shorter posts, to handle practically any item. One man on a fork truck, without helpers, can change the entire system of warehousing without getting off his truck.

We Can Help!

Paltier Material Handling Specialists are trained to make specific recommendations. Ask us to survey *your* storage needs—without obligation.

Write for 16-page Catalog

THE PALTIER CORPORATION
1703 KENTUCKY ST.
MICHIGAN CITY, IND.

▲ For more details circle NED-761 D3 on enclosed inquiry slip ▲

Chromalox Electric Heaters give fast, uniform and dependable heat for heating gases, liquids, viscous fluids; platens, dies, molds, ovens, soft metals and countless other heating uses. They install easily and quickly, provide concentrated and controlled heat that is safe, dependable, clean and economical. Put time and money saving Chromalox Electric Heat to work in your plant now.

Write for "100 WAYS TO APPLY ELECTRIC HEAT"

It's filled with application ideas on versatile, low-cost Chromalox Heaters. Send for your copy now.

IB-17

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Boulevard, Pittsburgh 8, Pa.

See other ad. on pg. 4

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-762 D3 on enclosed inquiry slip

RANDALL GRAPHITE BRONZE BEARINGS

OVER 800 SIZES TO CHOOSE FROM

These bearings can be produced from commercial stock size bearings or to blue print specifications.

WRITE FOR CATALOG NUMBER 109

BRONZE BAR STOCK · GRAPHITED BEARINGS · BRONZE BUSHINGS · THRUST WASHERS · PILLOW BLOCKS · BRONZE CASTING · SHEET LUBRICATOR · SAFETY COLLARS

Randall

RANDALL GRAPHITE BEARINGS, INC.

1007 S. GREENLAWN AVE., LIMA, OHIO

For more details circle NED-763 D3 on enclosed inquiry slip

Makes "Women's Work" of Handling DOUBLE-FACED PALLETS

Magic "Toggle-Booster" floats the truck into the pallet with minimum jolt or jar.

Easiest, quickest way to handle palletized loads—for short hauls, spotting loads or in congested areas. Just roll the truck into the pallet, lift the load and roll it away. Short stroke pump projects rear wheels through bottom face of pallet—lifts any load up to 4000 lbs. easily.

the SERVICE LEVER-LIFT*

*Write for Circular 411.

INDOOR MILES Made EASIER and SAFER

SERVICE CASTER & TRUCK CORP.

Executive Offices: Albion, Michigan
Plants at Albion, Michigan & Somerville 43, Mass.
See Your Classified Telephone Directory For Nearest Distributor

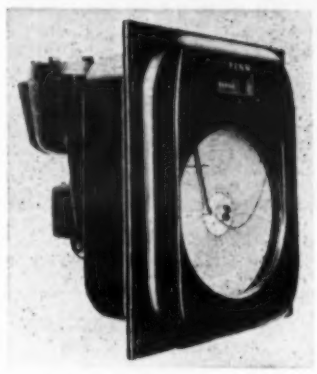
For more details circle NED-764 D3 on enclosed inquiry slip

CUSTOM-MADE TRAYS for protective parts handling uses

Fabricated from sheet rubber base plastic materials, custom - engineered materials handling trays protect parts from damage during handling, storage or processing. They can be made to hold from one to 300 individual parts or assemblies, and variety of color provides identification in production and inventory control. Fabricated of U. S. Royalite or Boltaron, trays are lightweight, greaseproof and shatter resistant. They will not corrode and withstand practically all fluids or vapors encountered in industry. Because of their shock-absorbing qualities, trays loaded with parts can be dropped without damage to trays or contents. They are also easy to clean, stack and store. Made by **Jered Engineering & Mfg. Co.**, 2323 E. Nine Mile Rd., Detroit 35, Mich.

For more details circle NED-765 D3 on enclosed inquiry slip

FLOW & LEVEL METER magnetic coupling eliminates need for opening in line or equipment



Use of magnetic coupling to connect the float in the manometer with external metering parts in this Magna-Clutch mechanical flow and level meter eliminates need for stuffing box or pressure tight bearings. Instrument is especially suitable for use on toxic, corrosive or inflammable liquids, because no leakage is possible.

High accuracy is possible because of large float, long float travel and frictionless magnetic linkage even at high static pressures. Seven interchangeable range tubes from 20 to 750 in. provide flexibility of differential range. Adjustment is possible down to 50 per cent of maximum for each range. Unit is also available with bell style manometer for low ranges of 4, 6, 8 or 10 in. of water.

Instrument is produced in recording, integrating, pneumatic transmitting and controlling styles for pressures up to 2500 psi. Made by **Penn Industrial Instrument Corp.**, Dept. 33, 4110 Haverford Ave., Philadelphia 4, Pa.

For more details circle NED-766 D3 on enclosed inquiry slip

IT COSTS LESS TO USE THE BEST!

PLS

1. Takes less PLS to give a perfect seal.
2. One compound for many services: water...oil...gas...steam...chemicals...petroleum products—low and high pressures.
3. Never washes out—one application lasts forever.
4. Never hardens: joints may be easily broken after years of service—no damaged connections.

Prove it to yourself. Send for a free sample. Crane Packing Company, 1811 Cuyler Avenue, Chicago 13, Ill.

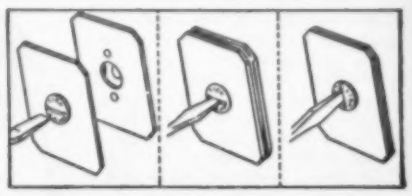
JOHN CRANE CRANE PACKING COMPANY

For more details circle NED-767 D3 on enclosed inquiry slip

For parts that must be TAKEN OFF . . . PUT BACK...BUTTONED TIGHT

LION FASTENERS

LOCKS TIGHT WITH A QUARTER TURN *Always at correct tension*



Lion Fasteners are *right* for buttoning parts that must be removed repeatedly for inspection, maintenance, or other reasons.

Vibration and shock can't loosen a Lion Fastener. Even an inexperienced service man can't replace it wrong. A quarter turn opens it. Another quarter turn locks it. The tension is *designed into it.*

Lion Fastener Spring Assembly is quickly spot welded or riveted in place. The stud cannot be lost. It is grommeted tight to the sheet. They will button sheets .040 plus or .020 minus over or under standard rating. The misalignment is as much as .156. The one-piece forged stud is tested to 1425 lbs. Write today for demonstration kit and application data. *TYPICAL APPLICATIONS:* INSPECTION PLATES • COWLING • ELECTRICAL PANELS • CABINETS • DUCTWORK

FREE DEMONSTRATION KIT

contains sample Lion Fasteners to help you visualize their adaptability to your product. Write on your company letterhead. No obligation.

LION FASTENERS, INC.

600 Main St., Honeoye Falls, N. Y.

For more details circle NED-768 D3 on enclosed inquiry slip

SUNNEN HONING MACHINES "Accuracy at Low Cost"

Here's Proof That It Pays to Use SUNNEN HONING on Jobs Like This Clutch Roller Housing

PROBLEM:

To hold tolerance of +.00025", −.00000" on a production job.
MATERIAL: 1020 steel.
HARDNESS: Rockwell 60 "C"
HOLE DIAMETER: 1.248"
LENGTH: 1.250"
STOCK REMOVAL: .002"

SOLUTION:

Model MBB-1290 Honing Machine, with Sunnen Simplex Honing Tool. The new machine was delivered and production was under way in less than 6 weeks after the original inquiry.

RESULTS:

Smooth, accurate holes well within specifications, at production rate of 50 per hour. Mating parts fit perfectly, *with no selective fitting.* Parts run better, last longer.

Sunnen Honing is showing similar results on hundreds of different parts in leading plants across the country. It's accurate, easy to use, fast—often does the job when nothing else will. On short runs you can frequently complete the job in less time than it would take to set up for other methods.

Send for NEW FREE BOOKLET—shows you many different ways Sunnen Honing is helping others—suggests ways it might be helpful in *your* plant.

Let SUNNEN HONING SOLVE YOUR HOLE PROBLEMS

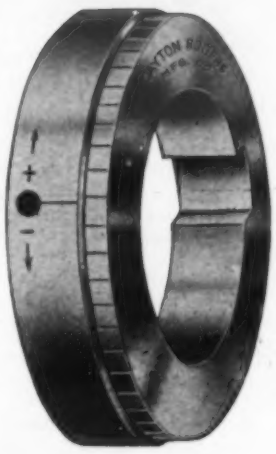
SUNNEN PRODUCTS COMPANY
7963 Manchester Ave., St. Louis 17, Mo.
Canadian Plant: Chatham, Ontario

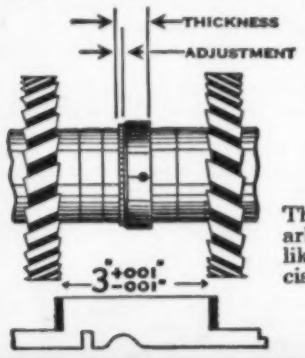
690R

For more details circle NED-769 D3 on enclosed inquiry slip

SAVE TIME on GANG MILLING SET-UPS

Dayton Rogers *hardened and ground*, adjustable micrometer spacing collars are considered the last word on all types of milling machine set-ups for gang milling, straddle milling and similar operations. They are quickly and easily adjusted to the plus or minus positive adjustment. The collar is so designed that it gives the minimum over-all thickness with the maximum adjustment, graduated in .001"





They are stocked for cutter arbors from 5/8" to 2". You'll like the speed, the precision, and the time saved!

Write Today For More Information!

DAYTON ROGERS *Manufacturing Company*
2829 13th AVE. S. MINNEAPOLIS, MINNESOTA

For more details circle **NED-770 D3** on enclosed inquiry slip

FOR MATERIAL HANDLING—

more and more—the swing is to wide-base pneumatic tires

GENERAL

INDUSTRIAL PNEUMATIC TIRES

More Designers are specifying wide-base General Pneumatics. They know Generals add these extra selling points to handling equipment.

SAVE TIME · MONEY · LABOR

- *MORE LOAD CAPACITY AT LOW OR HIGH SPEEDS*
- *CUSHION EQUIPMENT AND LOADS REDUCING BREAKAGE AND SPILLAGE*
- *SAVE HIGH COST FLOORS AND FLOOR SURFACES*
- *SLOW, EVEN WEAR FOR LONG SERVICE*
- *HIGH FLOTATION FOR EASIER ROLLING OVER SOFT GROUND*
- *ROLLS EASIER, SMOOTHER OVER ALL SURFACES*

Available separately or in assemblies of Tires, Tubes and Wheels. Size O.D. 8" to 27"—200 to 4000 lbs. cap. for low or high speeds.

Rigid **CASTER FORKS** *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

SEND FOR CATALOG . . . DEPT. 4

THE GENERAL TIRE & RUBBER CO. AKRON, O.

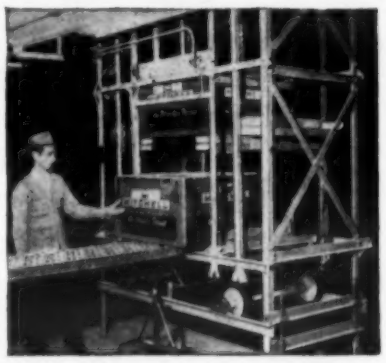
For more details circle **NED-771 D3** on enclosed inquiry slip

LOOSE-LEAF BINDERS
three locking types available

Tri-Lock, Cataloger and Lev-L-Lok are three loose-leaf binders offered for binding and covering price lists, catalogs and other material of a similar nature. Tri-Lock has a three-position button control, the first position for firm compression, the second for flat reference and the third for quick page changing. Cataloger and Lev-L-Lok are flat reference binders using a visual button locking mechanism and locking bar which makes insertion, removal or replacement of sheets easy. Imprinted, embossed letters and designs are below the cover surface for durability. All binders are offered in various colors in Levant grain buckram. Made by **Remington Rand Inc.**, Dept. NED, 315 Fourth Ave., New York 10, N. Y.

For more details circle **NED-772 D3** on enclosed inquiry slip

VERTICAL CHAIN CONVEYOR
furnished for practically any height



Fast vertical handling of materials in trays, cartons or boxes is provided by industrial-type subveyors. Packages are supported upright without jarring by flights on endless chains affording a continuous flow. Automatic loading or unloading from or onto horizontal feeding conveyors can be provided. Subveyors can be furnished for practically any height to handle packages of most any size at speeds up to 30 per minute. Photo shows 200-lb air conditioners being moved from third floor to shipping dock. Made by **Samuel Olson Mfg. Co.**, 2423 Bloomingdale Ave., Chicago 47, Ill.

For more details circle **NED-773 D3** on enclosed inquiry slip

V-LINK BELTING TOOL
for attaching and detaching links

Attaching and detaching V-Link belting is facilitated by the Brammertool prong-type tool. Light pressure inserts ends of prongs into standard slots of V links.

Easy twist opens up slots so that rivet heads can be quickly slipped in or out to make or break connections in the belting. Made by **Brammer Corp.**, Dept. NED, 684 Broadway, New York 12, N. Y.

For more details circle **NED-774 D3** on enclosed inquiry slip

ROTARY DIVIDING TABLE
is thin for high capacity under tool

This British-made Wafer-Thin precision rotary table is sufficiently accurate for jig boring, precision milling and drilling operations. Thinness feature provides increased capacity under tool. Maximum error through 180 degrees is 0.00025-in. Hardened steel worm is fitted into eccentric quill assembly to enable it to be disengaged. A dead stop is fitted to allow worm to be re-engaged to correct position. Large micrometer dial is also attached, in addition to divided ring around periphery of table. Sizes available are 11 and 12-in. diameter. Lined case with chrome-plated handles are supplied, and dividing plates, accessories and replacement parts are obtainable. Available from **British Industries Corp.**, International Machinery Div., Dept. NED, 164 Duane St., New York 13, N. Y.

For more details circle **NED-775 D3** on enclosed inquiry slip

RUEMELIN *Blast Cleaning* CABINETS

RUEMELIN Blast Cabinets are practical for a great variety of cleaning operations. They are extensively used to remove heat-treating scale and to clean sub-assemblies in metalworking shops, foundries, aircraft factories, etc. Built in many sizes. Furnished complete with dust control equipment. Write for Bulletin 32-B.

RUEMELIN MANUFACTURING CO.
3883 N. PALMER ST. • MILWAUKEE 12, WIS., U. S. A.
Manufacturers and Engineers SAND BLAST AND DUST COLLECTING EQUIPMENT, WELDING FUME COLLECTORS

A 5135-1/9AR3

For more details circle **NED-776 D3** on enclosed inquiry slip

FIGHT FIRES with ROCKWOOD *TRIPLE-ACTION* WATERFOG NOZZLES

Illustrated, Rockwood WaterFOG Nozzle Type SG-48.

With a Rockwood Nozzle you can pick your discharge pattern. Its triple action gives you conventional straight stream, high velocity WaterFOG or low velocity WaterFOG. You get quicker quenching of fires because the Rockwood nozzle goes into action faster . . . . there's more protection to life and nearby combustibles . . . and there's less water damage because less water is used. Write for booklet, "15 Types of Fire Protection," to get the newest information in fire protection.

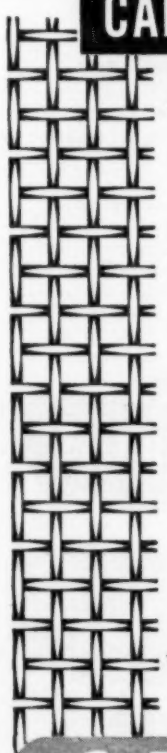
Tested by Underwriters' Laboratories, Inc., and approved by Factory Mutual Laboratories.

ROCKWOOD

ROCKWOOD SPRINKLER CO.
Engineers Water . . . to Cut Fire Losses
44 HARLOW STREET, WORCESTER 5, MASS.

For more details circle **NED-777 D3** on enclosed inquiry slip

CAL-WIC WIRE CLOTH



THE RIGHT WEAVE

• • • for every industrial requirement including screening, filtering, grading, cleaning and numerous other types of processing.

THE RIGHT WEIGHT

• • • precision-fabricated for long-lasting dependability and economy.

THE RIGHT METAL

• • • for highest resistance to chemical action, moisture, corrosion, abrasion and extremes of temperature.

For additional information write or phone our nearest sales office.

THE COLORADO FUEL & IRON CORPORATION – Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION – Oakland, California
WICKWIRE SPENCER STEEL DIVISION – Clinton, Massachusetts

CAL-WIC CFI
INDUSTRIAL SCREENS
THE COLORADO FUEL AND IRON CORPORATION

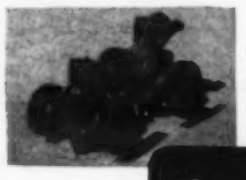
For more details circle **NED-778 D3** on enclosed inquiry slip

They had bugs in their bonnets

—but they sired a new champion

Along with early models of blowout preventers, Christmas trees and other oilfield products that have helped to establish Cameron as the *world leader in pressure control*, ancestors of the Non-Lubricated Lift Plug Valve are also proudly displayed in our own private hall of fame.

Each of these predecessors made a worthwhile contribution to the unique valve which is proving itself the champion of all sorts of difficult services in petroleum, chemical and process industries.



Screwed, flanged, or butt-welding ends available in standard ASA and API pressure classes.

Cameron IRON WORKS, INC.

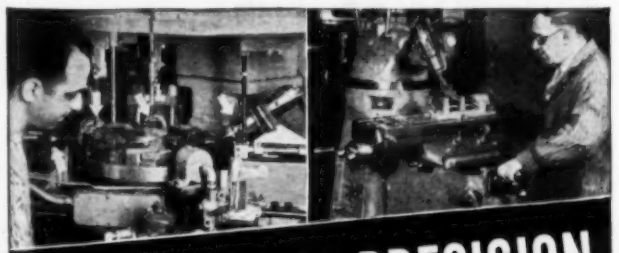
C. I. W., Inc., P. O. Box 1212, Houston Texas. Export: 7912 Empire State Bldg., New York, N. Y.

For more details circle NED-779 D3 on enclosed inquiry slip

MERRILL MATERIALS HANDLING DEVICES

MERRILL BROTHERS
56-13 ARNOLD AVENUE MASPETH, N. Y.

For more details circle NED-780 D3 on enclosed inquiry slip



LOWEST COST PRECISION FOR TOOL ROOM AND PRODUCTION

ONE PORTABLE MULTI-PURPOSE PRECISE GRINDER-MILLER WITH MACHINE TOOL MOUNT DOES THE WORK OF A SINGLE-PURPOSE MACHINE COSTING 100 TIMES AS MUCH!

Little can be done today to reduce labor and material costs. For substantial savings employ new, better techniques. Mount PRECISE Grinder-Millers on lathes, drill presses, milling machines and other machine tools or use in special production set-ups. ¼ HP; speeds from 20,000 to 45,000 r.p.m.; 115 volts, AC-DC. Ruggedly built for continuous duty. All metal housing; rigid PRECISE quill; sealed micro-precision bearings. *High speeds and accurate PRECISE quill and chuck are ideal for tungsten carbide cutters.* PRECISE will grind, mill or finish any material from soft wood to the hardest alloy steel.

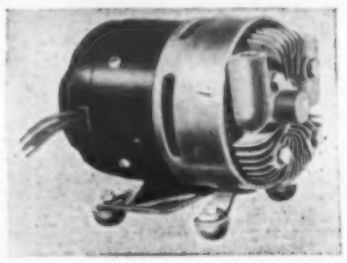
Write FOR NEW CATALOG

PRECISE PRODUCTS CORP. 1346 Clark St., Racine, Wis.

Precise GRINDER-MILLERS

For more details circle NED-781 D3 on enclosed inquiry slip

INDUSTRIAL AIR PUMPS provide oil-free air for wide variety of industrial uses



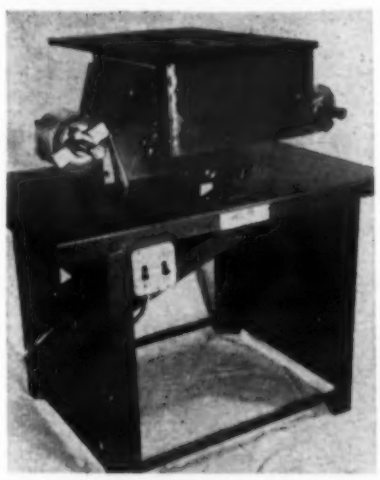
Based upon companion line of oil-free air pumps for aircraft, Lear-Romec industrial air pumps are compact motor-pump units. They are readily adapted to processes or machines requiring vacuum, pressure or combined vacuum and pressure. Evacuation to 20 in. of Hg suction or pressurizing to 10 psi can be continuous.

Pump operates absolutely dry, and carbon-graphite composition blades and thrust plates are self-lubricating. Pump rotor and four sliding blades are the only moving parts, and they compensate for wear automatically. Pump impeller parts are assembled on one end of extended motor shaft so that no pump bearing is required. Integral assembly of pump and motor provides accessibility to all parts through the pump end.

Line consists, at present, of six stock sizes with free air capacities of 0.5 to 5 cfm. G-E motors are wired for 115-230-v 60 cycle ac and operate at 1725 or 3450 rpm. Made by **Lear, Inc.**, Romec Div., 1440 Abbe Rd., Elyria, O.

For more details circle NED-782 D3 on enclosed inquiry slip

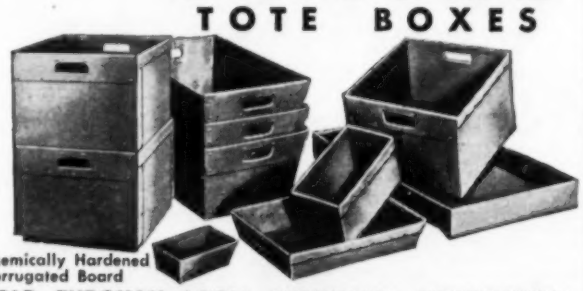
HEAT SEALING MACHINE delivers completely sealed package



After automatically forming two sheets of heat sealing material around products, the Auto-Pak packaging machine seals the four sides, cuts off and delivers a completely sealed package. It plugs into any light circuit to make packages from 1 in. square by ½-in. thick to 6 in. square from practically any heat sealing web, including cellophane, foil, glassine and heat sealing kraft. Belt, turret, hopper and other attachments are available for automatic feeding of a wide variety of items. Speed is up to 40 packages per minute with hand feeding, or higher with automatic or semiautomatic feed. Machine measures 3 x 2 x 3 ft. Made by **Pak-Rapid Inc.**, Dept. N, 530 N. 21st St., Philadelphia 30, Pa.

For more details circle NED-783 D3 on enclosed inquiry slip

FAMOUS "CHEM-BOARD" CONVOY TOTE BOXES



*Chemically Hardened Corrugated Board

SOLD THROUGH LOCAL INDUSTRIAL DISTRIBUTORS

Cost—weigh—50% to 60% less than steel. A wide range of sizes in standard and custom made NESTING, STACKING, VERTICAL TOTE BOXES. Write for complete information, prices, name of distributor in your area.

CONVOY RECORD STORAGE FILES

Sold Only by YOUR LOCAL STATIONER

Used by most famous names in industry and businesses of all kinds. CONVOY "CHEM-BOARD" files for record storage made in letter, legal, and 12 other sizes. Stack to ceiling, mate together. Call your local stationer or write for name of stationer nearest to serve you.

CONVOY, INC.
Canton 6, Ohio
P. O. Station B, Box 216-N

For more details circle NED-784 D3 on enclosed inquiry slip

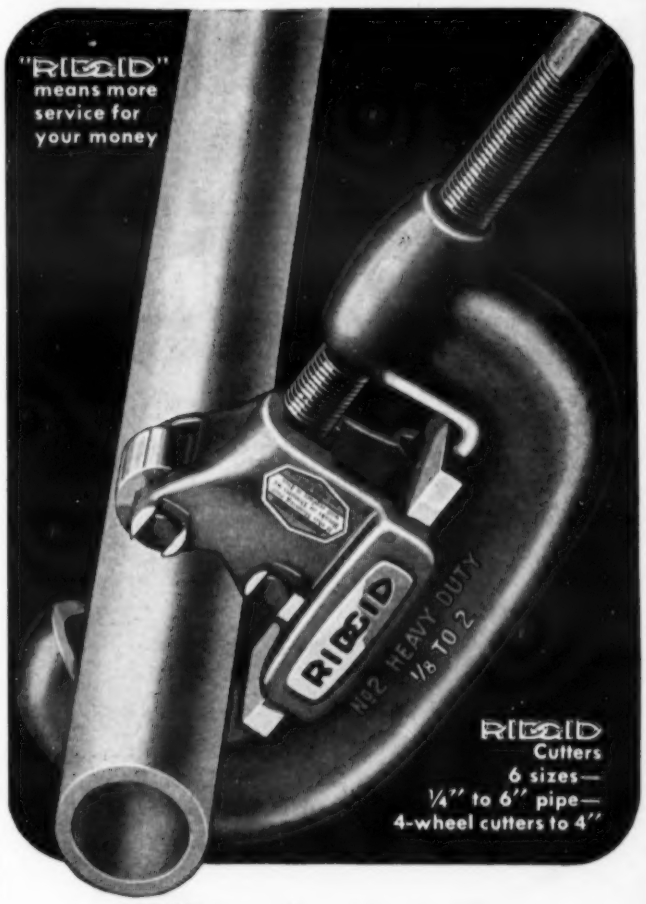
Now! CIRCULAR BOTTOM POLYETHYLENE drum liners

- ... New low cost
- ... Last longer
- ... Eliminate mandril
- ... Are easier to insert
- ... MEHL Liners fit better
- ... Eliminate pinch-points and pin-holes
- ... Eliminate stress and strain on liner and seams
- ... Material easier to get out of the drum

FREE BOOKLET... describes uses and advantages of MEHL Polyethylene Plastic Drum and Carton Liners which save container costs, packing costs, tare weight charges, wasted material and salvage costs in the shipment of all sorts of liquids, semi-liquids and solids . . . write for your copy today. Also request "Guide to Military Packaging."

MEHL MANUFACTURING CO.
2057 Reading Road Cincinnati 2, Ohio

For more details circle NED-785 D3 on enclosed inquiry slip



Millions of users agree— you cut more pipe with less work with RIGID Heavy-Duty Cutters

There's a big difference in pipe cutters—and you're sure of it the first time you slap a RIGID on a pipe (any kind) and see how easily cleanly it rolls through the metal. Beautifully balanced for easy action. Factory tested for perfect tracking—and guaranteed warp-proof housings of special malleable hold it. High alloy thin-blade or heavy-duty cutter wheels that leave practically no burr. You cut pipe fast with least effort. Ask your Supply House for the more-for-your-money RIGID.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIGID Work-Saver Pipe Tools

For more details circle NED-786 D3 on enclosed inquiry slip

NEW AMP TECHNICAL CATALOG of SOLDERLESS WIRING!

Here, for the first time, is a complete 78 page catalog of technical information devoted solely to solderless wiring. AMP's engineering and research facilities are outlined together with test data covering altitude, corrosion, comparative resistance, low currents, radio and audio frequencies, etc. Actual case studies are included which give savings in time and labor in typical applications. Send for your catalog today!

AIRCRAFT-MARINE PRODUCTS INC.
2100 PAXTON STREET, HARRISBURG, PA.
AMP Trade-Mark Reg. U.S. Pat. Off.

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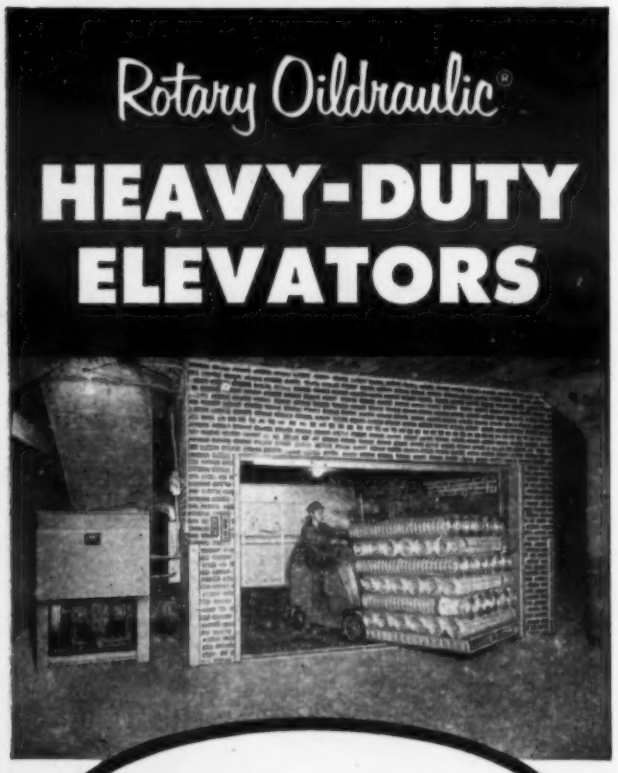
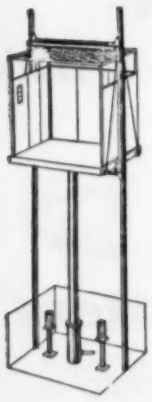
Rotary Oildraulic®

HEAVY-DUTY ELEVATORS



Most economical type for rises up to 50 feet



FEATURES:

- Modern hydraulic operation
- No costly, unsightly penthouse
- Smooth starts and stops
- ¼" accuracy on landings
- Low operating and upkeep expense
- Rugged car construction
- Engineered for power truck loading
- High efficiency power units
- New Oildraulic Controller
- Capacities up to 100,000 lbs.

Over 65,000 Oildraulic elevators and lifts are now in use . . . backed by Rotary's coast-to-coast organization.

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ROTARY LIFT CO., 1016 Kentucky, Memphis 2, Tenn.
Send catalog on Rotary Oildraulic Elevators to:
Name_____
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Rotary

OILDRAULIC ELEVATORS

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LIQUID ABRASIVE BLAST UNIT for cleaning, finishing, deburring and etching dies, tools and parts

Completely redesigned Jet Blast liquid abrasive blasting machine is designed to clean, finish, burr, blend or etch a wide variety of dies, molds, tools and other parts. It will handle abrasives ranging from 60 to 5000 standard screen size, and construction permits fast change-over of abrasive slurry. Reversible pump beneath cabinet permits a complete change of slurry in 5 minutes.

Liquid slurry, which is maintained as a suspension, is drawn up by siphon injection and propelled from the blasting nozzle by means of a high velocity air stream. Machine is available from stock in three standard sizes. It can be supplied with a turntable to speed handling of pieces and can be fitted with up to eight fixed blast nozzles to speed production. Automatic or semiautomatic operation is possible.

Since all factors can be controlled, wide range of cleaning and finishing operations is possible. Clean matte finish produced on parts affords good base for subsequent painting or finishing operations. Sharp edges are retained if desired on irregular-shaped parts, and metal removal can be held to within 0.0001-in. Made by **R. W. Renton & Co.**, 788 Addison Rd., Cleveland 3, O.

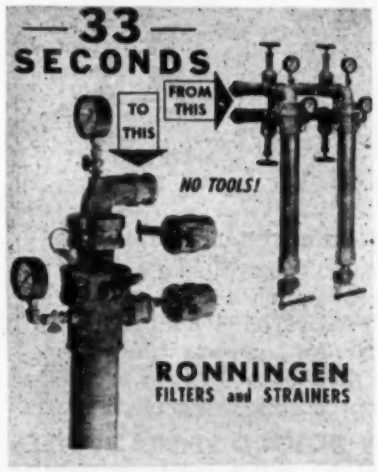
▲ For more details circle NED-789 D3 on enclosed inquiry slip ▲

FORK TRUCK LOAD STABILIZER assures safe handling of loads

Unstable and semi-stable loads are handled safely with up to 6000-lb capacity power fork trucks equipped with hydraulic-powered load stabilizer. Device also enables operators to stack to greater heights with maximum safety. Attached to standard vehicles, device consists of hydraulic cylinder actuated steel or rubber-faced plate which descends on top of load to hold it steady during lifting, transportation and stacking or unloading. Action of stabilizer is controlled by handle adjacent to operator's right hand. Clamping pressure can be varied to suit product being handled, within limits of 150 to 1350 lb. Made by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 3, O.

▲ For more details circle NED-790 D3 on enclosed inquiry slip ▲

TUBE TYPE FILTER for water, oils, hydraulic fluids



Superfine straining of fluids is performed by this tube type filter which has a non-short-circuiting design to insure retention of any size particle desired. Use is for filtering process water, gasoline and oils, hydraulic fluids, chemicals and special liquids. Quick-acting coupling permits the entire filter to be removed from the line and the element serviced in about one-half minute. Blow-off is incorporated for normal cleaning. Filter materials are Monel, copper and brass. Units are available in single, double, triple and other multiples for particle retention from 1/16 to 0.0012-in. Capacity range is from 5 to 5000 gpm with pressures to 150 psi. Made by **Ronningen Mfg. Co.**, Dept. 1152-D, Vicksburg, Mich.

▲ For more details circle NED-791 D3 on enclosed inquiry slip ▲

for all stud threads and stainless steel applications . . .
LEADING INDUSTRIALS
now standardize on

C-5 "HI-TEMP" THREAD COMPOUND

√ speeds up dis-assembly time!
√ prevents stud breakage!
√ eliminates pitting of stainless steel!

NO MORE FROZEN OR GALLED STUDS EVEN AT 1800° F

Stud breakage, long an expensive maintenance problem has been solved by the leading industrials who have standardized on Fel-Pro C-5 "Hi-Temp" as an anti-seize coating for all stud threads and stainless applications.

Fel-Pro's exclusive Colloidal-Copper formula allows for easy separation and reduces stud breakage of threaded assemblies after long exposure to extreme temperatures. It eliminates galvanic pitting of stainless and alloy steel even where dissimilar metals are joined.

Conduct your own tests with C-5 "Hi-Temp" at our expense. See how it can lick your toughest thread breakage problems . . . Write for FREE Sample and complete data sheet TODAY!

FELT PRODUCTS MFG. CO.
1510 Carroll Ave., Chicago 7, Illinois

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drills 6 inches of concrete per minute

. . . gives lowest cost per foot of concrete drilled with a

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ROTARY KONKRETE KORE DRILL

Patented core slot expels cuttings automatically

U. S. Pat. No. 23539

Drill straight, clean, ready-to-use holes at speeds up to 6 inches per minute—even through steel reinforced concrete. TILDEN Rotary Koncrete Kore Drills can be used with ordinary electric or rotary air drill. Free Factory sharpening and repair service on all Standard TILDEN Drills from 3/16" to 8-inch diameters. Interchangeable shanks for any depth hole.

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Branch Office: 1144 W. Washington Blvd., Chicago 7, Illinois

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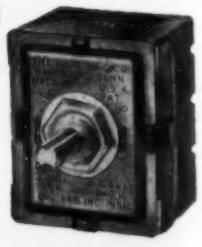
Cut Wiring Time WITH 'DIAMOND H'

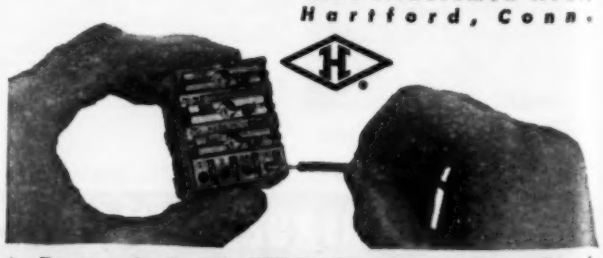


Heater and Motor Rated Rotary Switches

Simplest and fastest method yet devised for wiring up a switch provides instant, automatic, positive connection . . . without binding screws, extra clips or other gadgets. Push the stripped end of your standard wire, solid or stranded, into auto-lock connection of Series 850 Rotary Switches and wire is gripped firmly. Depressing small lever gives instant release.

Compact design permits close cluster or in-line assemblies. Standard, heavy horsepower rating available in off-on, 3-heat, 5-heat, 7-heat, 9-heat and special circuits with one-hole, two-hole or special mounting arrangements. Patent pending. UL Approved. Ruggedly built to give extra-long service. Send us your requirements today.

THE HART MANUFACTURING COMPANY
204 Bartholomew Ave., Hartford, Conn.



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NOLAN ONE-MAN CAR DOOR OPENER

Opens Doors in 20 seconds or less!

The Nolan Car Door Opener gives one man a tremendous amount of pulling energy, to get the most stubborn, hard-rolling door wide open in a hurry!
No gangs needed. No mangled limbs or loss of life. A few quick pulls on anchor chain gets any door open in a jiffy. The NOLAN saves its low initial cost in first hour of operation.
New safety and efficiency features now make the Nolan 1-Man Car Door Opener a more necessary labor-saving money-saving help than ever before.
Free Literature. Order one or more NOLAN Model-H Car Door Openers now. Catalog on request.

$29.50 F.O.B. Bowerston

MANY THOUSANDS IN CONSTANT DAILY USE

THE NOLAN COMPANY, 128-C Pennsylvania Street, Bowerston, Ohio

▲ For more details circle **NED-795 D3** on enclosed inquiry slip ▲

▲ For more details circle **NED-796 D3** on enclosed inquiry slip ▲

▲ For more details circle **NED-797 D3** on enclosed inquiry slip ▲

DIE FORGE CASTING MACHINE injection provides for rapid fill and high final squeezing pressure

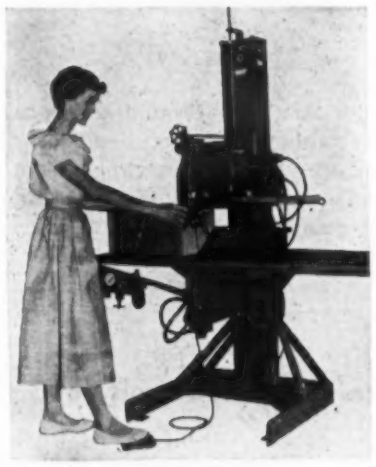
Principle of "cold chamber" injection introduced by this bronze, aluminum or magnesium die forge casting machine provides for rapid fill while metal is molten and very high final squeezing pressure. This prevents shrinkage voids as metal freezes and excessive porosity due to air and gases being trapped in the dies. Also featured is Hydra-Lock clamping method which develops final clamping pressure of 650 tons.

Short stroke of clamping cylinder and liberal clearances in the guides allow quick line-up of die faces. Action of cylinder is such as to provide essentially ball-and-socket action within reasonably close limits. Injection pressure of up to 100,000 psi is accomplished by hydraulic two-stage system employing two pistons, one concentric with the other. Pressure in system is 2100 psi.

Hydraulic power unit is furnished separate and may be set anywhere with reference to machine itself. Machine bed, frame and platens are fabricated from heavy rolled steel plate for maximum strength. Made by **Lewis Welding & Engineering Corp.**, Interstate & Cross Sts., Bedford, O.

▲ For more details circle **NED-798 D3** on enclosed inquiry slip ▲

CARTON STAPLING MACHINE closes top and bottom simultaneously

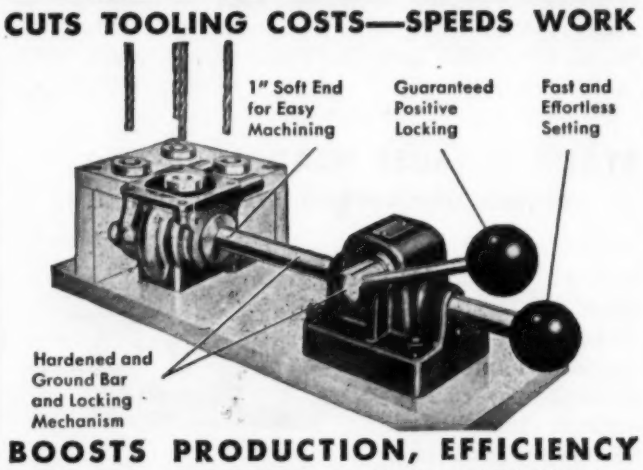


This air-operated, semiautomatic Staple King simultaneously closes tops and bottoms of center slotted and partial or full overlap cartons, either corrugated or fiber, at rate of 350 an hour. Retractable anvils allow closure from outside, after cartons are filled with merchandise. Roller table, adjustable to height of existing conveyor system, guides cartons toward foot switch actuated stapling heads. Machine accommodates cartons varying in height up to 5½ in., and a 2-second adjustment sets machine when variance is greater than 5½ in. Stapler is equipped with air filters, lubricators, regulators and warning lights that flash when staple supply is low. Made by **International Staple & Machine Co.**, 802 E. Herrin St., Herrin, Ill.

▲ For more details circle **NED-799 D3** on enclosed inquiry slip ▲

HEINRICH "GRIP-MASTER" FIXTURE LOCK

CUTS TOOLING COSTS—SPEEDS WORK



BOOSTS PRODUCTION, EFFICIENCY

Now—at the request of industry—we offer the new "Grip-Master" Screwless Fixture Lock, applicable for fixtures and jigs used in drilling, milling operations, etc. It incorporates the same high-quality locking mechanism proved by industrial use in the famous "Grip-Master" Screwless Drill Press Vise. Pays for itself quickly by increasing production, cutting tooling costs, etc. See your Dealer, or write for details.

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DEPT. 303-D • RACINE, WIS.
DRILL PRESS VISES • FIXTURE LOCKS • NIBBLERS
PUNCHES • ROD CUTTERS

▲ For more details circle **NED-800 D3** on enclosed inquiry slip ▲

▲ For more details circle **NED-801 D3** on enclosed inquiry slip ▲

Clean, degrease small parts IN 5 MINUTES!

Twice as fast as hand dipping. Get high-speed cleaning and degreasing, with a LIGHTNIN Mixer in any tank or container.

Mixer makes solvent flow rapidly over and around small parts, castings, etc. Cleans intricate parts thoroughly in 5 minutes. Easily installed in your tank—we show you how. Fully guaranteed. *For details, send for Catalog B-103.*

Mix fluids in a few seconds in any tank or container, with a LIGHTNIN Portable Mixer. Cheaper, faster than hand stirring. Mix paint, glaze, chemicals . . . dissolve powders, crystals . . . blend food products, flavors, syrups—do hundreds of mixing jobs quickly and thoroughly. Fully guaranteed. Thousands in use. Thirty models ⅛ to 3 HP. *Send for Catalog B-75.*

FOR BIG MIXING JOBS

LIGHTNIN turbine and paddle mixers for open or closed tanks. Sizes 1 to 500 HP. Send for Catalog B-102.

LIGHTNIN side entering propeller mixers. Sizes 1 to 25 HP. Send for Catalog B-104.

MIXING EQUIPMENT CO., Inc.
165 Mt. Read Blvd., Rochester 11, N. Y.
In Canada: William & J. G. Greey, Ltd., Toronto 1, Ont.
MIXCO fluid mixing specialists

▲ For more details circle **NED-802 D3** on enclosed inquiry slip ▲

dependable

McGILL® LAMP GUARDS outlast all others

McGill 7000 SR with rubber handle, reflector and Levolier Switch

McGill 7000 Series Lamp Guards are built to withstand the hard wear and abuse of heavy industrial use. Proven to last many times longer than ordinary lamp guards. The handle is durable rubber and the cage has extra-heavy steel wires, electrically welded for strength — zinc plated chromate finish. Available in many other models — also with 18-28 JT thermoplastic cord and plug.

Send for McGill Catalog No. 49-A

McGILL® electrical specialties

McGILL MANUFACTURING CO., INC. 151 N. CAMPBELL ST. VALPARAISO INDIANA

▲ For more details circle NED-803 D3 on enclosed inquiry slip ▲

New Hunter Industrial Fan

POWERFUL, LOW-COST VENTILATION

FEATURES:

- Streamlined orifice for efficient air entrance
- Aluminum alloy blades—non-rusting, non-crystallizing, non-overloading
- "Gull Wing Design" airfoil blades for strength and uniform pressure
- Effective up to ½ in. static pressure
- Heavy continuous-duty motor
- Permanently lubricated and sealed for life
- Direct-drive for reduced maintenance costs
- Automatic shutters to fit all fan sizes

Hunter

CLIP AND MAIL NOW FOR COMPLETE DATA

Hunter Fan & Ventilating Company
373 S. Front St., Memphis 2, Tenn.
Send complete information on Hunter Industrial Fan to:

Name_____

Address_____

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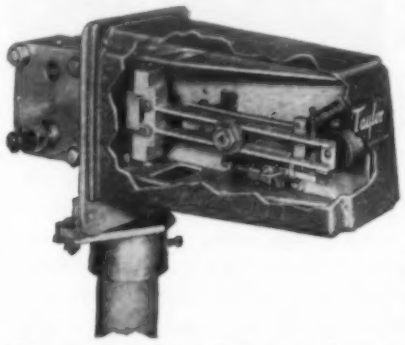
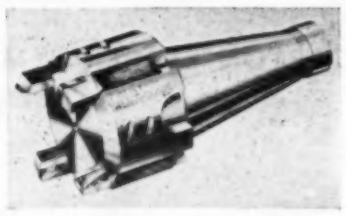
FLOW METER of differential pressure type

Fluid flow measurement, liquid level or any process requiring differential pressure measurement and transmission can be carried out by the Transaire differential pressure transmitter. It can be used to measure flow of liquid, steam or gas; liquid level; or specific gravity. Transmitter has two basic units, the primary which senses differential pressure and the secondary which transmits the proportional output air pressure. Latter unit is completely enclosed to keep out foreign elements. Two ½-in. pressure taps on both high and low pressure sides adapt the transmitter for any kind of service. Two ranges are offered—20 to 200 in. water and 80 to 800 in. water. Made by **Taylor Instrument Cos.**, 53 Ames St., Rochester 1, N. Y.



▲ For more details circle NED-805 D3 on enclosed inquiry slip ▲

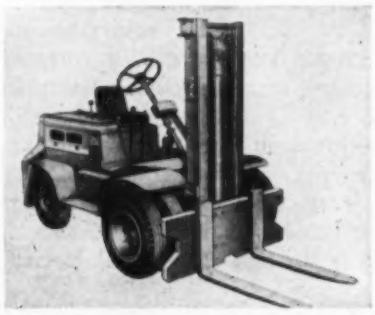
FLY CUTTERS in four and six blade styles



Economy as well as speed of production is assured with universal fly cutters which can be used easily on present equipment. Body slots are milled and finish-ground to precision tolerances. Blades are also ground on both locating sides to assure minimum of total indicator run out when tool is in operation. Sizes range from 3 to 6 in. and are available in four and six blade styles. Made by **Wendt-Sonis Co.**, Dept. NE-1, Hannibal, Mo.

▲ For more details circle NED-806 D3 on enclosed inquiry slip ▲

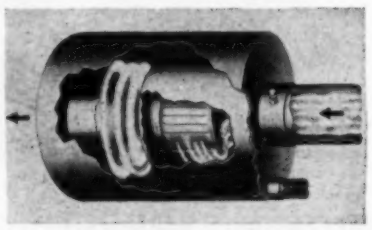
FORK LIFT TRUCK features three-speed transmission



A three-speed transmission and a new fork mounting plate assembly have been incorporated in the improved Yardlift-60 fork truck. Low speed ratios between 1st, 2nd and 3rd gears at gear-changing speeds results in smooth easy shifting. Low-speed gear has double the power of the earlier Yardlift-60, enabling it to climb a 24 per cent grade under full load. This transmission is used only in the friction-clutch model. The fork mounting is designed for greater interchangeability of attachments and devices between all makes of trucks with comparable capacity. Made by **Clark Equipment Co.**, Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

▲ For more details circle NED-807 D3 on enclosed inquiry slip ▲

STACK EXHAUST HEAD cleans discharged steam, vapors



Developed for industrial stacks to clean up exhaust steam and vapors discharged into the atmosphere, this exhaust head has no moving parts or filters. Entrainment laden vapor entering the purifier is engaged by stainless steel stationary centrifugal element which imparts controlled and rapid rotation to vapor. This action guides dirt, guck, oil and water outward to purifier's walls where it is drained to and ejected out the drain. Only clean, dry steam is discharged. Standard models have slip-on or flange connection for stack and threaded connection for drain. Body is fabricated steel. Made by **V. D. Anderson Co.**, Dept. EH, 1932 W. 96th St., Cleveland 2, O.

▲ For more details circle NED-808 D3 on enclosed inquiry slip ▲

Reduce dressing time by two-thirds! Operate at temperatures above red-heat!

Cut down your resistance welding or brazing costs! Speed up your work! On a typical high temperature job where ordinary carbons were changed hourly, Stackpole Carbons processed with our new "F" treatment lasted all day! Three to four times longer life on the average elevated temperature job is an extremely conservative estimate of the saving involved. And they require dressing only about one-third as often!

STACKPOLE CARBON CO., ST. MARYS, PA.

STACKPOLE

WRITE FOR SAMPLES State shape and size required. Mention company connection.

"EVERYTHING IN CARBON BUT DIAMONDS"

▲ For more details circle NED-809 D3 on enclosed inquiry slip ▲

WHICH ONE WOULD YOU CHOOSE?

If you don't know offhand, don't worry about it. Buy Dunham specialties and you're sure to get traps and valves that are "just right" for your system. Since Dunham makes the most complete quality line of Heating Specialties available, why waste time shopping around?

Just depend on Dunham for *all* your traps and valves —and save time as well as steam. For full details, WRITE FOR BULLETIN 1501-14.

DUNHAM

C. A. DUNHAM CO.
400 West Madison Street, Chicago 6, Illinois
HEATING SPECIALTIES

Quality first for fifty years

▲ For more details circle NED-810 D3 on enclosed inquiry slip ▲

CANNON PLUGS for hermetic sealing

SUB-MINIATURE U Series plugs for miniature switches, relays, transformers, amplifiers and other sealed components have steel shells and Silcan insulation, cable relief and moisture resistant sleeve. Bayonet-lock coupling method. Rated 1700 v. D.C.; 5 a.—Have 3, 6, and 12 contacts—one plug style and two receptacles. Refer to U-2 Bulletin.

GS TYPES (Top, right) and RKH Types (Bottom, right) have fused vitreous insulation providing a true hermetic seal for relays, position indicators, etc. Cadmium finish steel and bleached Iridite shells with Dural coupling nut. Resist thermal shock—300°F. to 600°F.; pressures 200 to 900 psi—specials to 7500 psi. See GS-3 section in AN-8 Bulletin and KH-1 section in K Bulletin.

CANNON ELECTRIC
Since 1915

FACTORIES IN LOS ANGELES, TORONTO, NEW HAVEN
Representatives in principal cities. Address inquiries to Cannon Electric Co., Dept. D-113, Los Angeles 31, California.

▲ For more details circle NED-811 D3 on enclosed inquiry slip ▲

Now!

Bulletin brings you facts on new Fenwal Midget THERMOSWITCH® Control

Send for your free copy today!

Need accurate temperature control or detection within limited space requirements? Then the new Fenwal Midget THERMOSWITCH unit will be a welcome solution to your problem.

With a ¼" outside shell diameter, this compact unit contains the same outstanding advantages found in standard THERMOSWITCH controls. Has extremely high sensitivity and excellent control stability — its outer shell is the activating element. High resistance to shock and mechanical vibration are provided in the rigid construction. Wide temperature range from —50°F. to 450°F. Used for temperature control or detection in gases, solids, liquids.

Typical applications: antennas, airplanes, helicopters, electronic equipment, computers, process control equipment, reciprocating engines, molding presses or platens.

For complete information on this unusual new Fenwal unit, send now for your free copy of the Midget THERMOSWITCH control bulletin! Write **Fenwal Incorporated, 84 Pleasant Street, Ashland, Mass.**

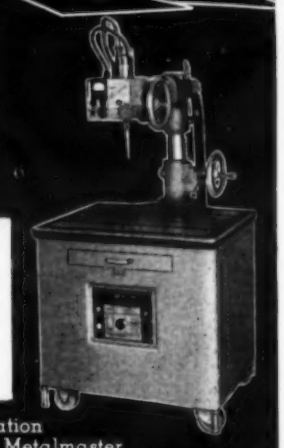
Fenwal **THERMOSWITCH®**
Electric Temperature Control and Detection Devices
SENSITIVE...*but only to heat*

▲ For more details circle **NED-812 D3** on enclosed inquiry slip ▲

METAL DISINTEGRATION!

by THOMAS METALMASTER

TOOL STEEL CUTTING · TOOL & DIE REPAIRS · TAP REMOVAL · DRILL PULLING



WRITE TODAY!
There's a technical engineer in your area that'll give an on the spot demonstration in your plant at your convenience.

METALMASTER
DIVISION OF THE
CLINTON MACHINE
COMPANY
CLINTON, MICHIGAN

For further technical information relative to the famous Thomas Metalmaster Disintegrators write to the main office listed above and prompt service will be given your inquiry.

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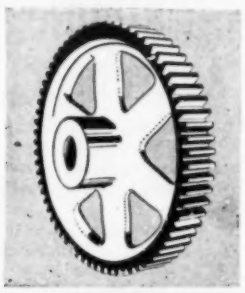
NEED GEARS?

250,000 cost-wise industrial buyers agree . . .

Best Buy is
BOSTON *Gear*
STANDARD STOCK GEARS

Over 2000 types and sizes in stock.
Metal—Non-metallic—Fabroil.



In Stock at your nearby

BOSTON GEAR DISTRIBUTOR

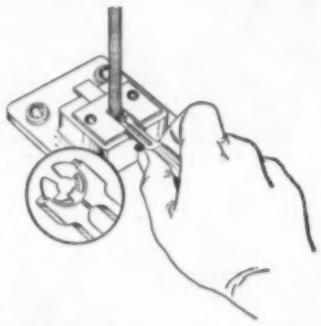
Catalog on request. Ask your Boston Gear Distributor, or write: Boston Gear Works, 69 Hayward Street, Quincy 71, Mass.

▲ For more details circle **NED-814 D3** on enclosed inquiry slip ▲

RETAINING RING DISPENSER

speeds handling and assembly work

Fast handling and assembly work with Truarc series 5133 E-retaining rings is made possible by this dispensing unit which consists of machined weighted base that secures to top of bench or assembly table. E-rings are supplied stacked on rods which fit into base and are locked into position. Rings line up ready for extraction, one at a time, with applicator. As ring is extracted, actuating slide feeds new ring into position. Made by **Waldes Kohinoor, Inc.,** Dept. O57, 47-16 Austel Pl., Long Island City 1, N. Y.



▲ For more details circle **NED-815 D3** on enclosed inquiry slip ▲

INDUSTRIAL BATCH OVENS

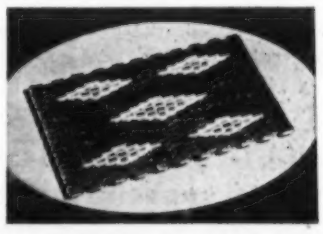
temperature range is 100° to 600° F

Automatic wattage control, balanced heat and temperature range of 100° to 600° F are features of line of fully automatic, extra heavy duty industrial batch ovens. Diagonal forced air flow permits heated air to be circulated from both sides, horizontally and vertically. Positive fresh air intake and exhaust are standard equipment. Applications include armature baking, aging, drying, preheating, finish baking, plastics curing and tempering. Three models have chamber widths of 24, 36 and 48 in., while height and depth on all units are 48 and 24 in., respectively. Made by **Blue M Electric Co.,** 307 W. 69th St., Chicago 21N, Ill.

▲ For more details circle **NED-816 D3** on enclosed inquiry slip ▲

FLOOR MATS

made of corrugated rubber links

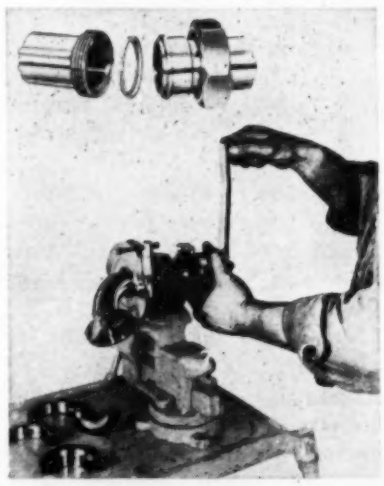


Corrugated mats made of synthetic rubber links woven on 12-gage spring steel wire provide comfortable footing to prevent slipping and reduce worker fatigue. They can be used without deterioration where moisture, oils, animal fats, acids, chemicals, solvents and abrasives are prevalent. Priced at $2.00 per sq ft, mats are offered in any length and in widths up to 48 in. Available from **General Scientific Equipment Co.,** 2701 W. Huntingdon St., Philadelphia 32, Pa.

▲ For more details circle **NED-817 D3** on enclosed inquiry slip ▲

CONVERSION TOOL

for bevel seat fittings and unions



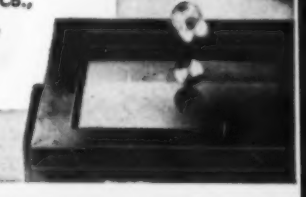
With the use of this Super Speed conversion tool, bevel seat sanitary fittings and unions can be converted to close-fitting leak-tight gasket seat joints to be used with regular take-down lines or for cleaned - in - place piping. Converted fittings take Hycar gaskets which are precision molded, self-positioning, smooth, nontoxic, fat resistant, non-absorbent and can be sanitized by 250° F steam. Conversions are made without dimensional change and have flush interiors, crack-free joints and are leak-tight. Made by **Tri-Clover Machine Co.,** 2910 60th St., Kenosha, Wis.

▲ For more details circle **NED-818 D3** on enclosed inquiry slip ▲

This glass can take impact!

Dropped 10 feet, a ½-lb. steel ball bounces right off ¼"-thick L·O·F *Tuf-flex** Tempered Plate Glass. And *Tuf-flex* can carry more load, resist greater thermal shock than untempered glass. Use it where you couldn't use glass before. And see how this *tough* glass can *replace* costlier materials in your products. Write for your free *Tuf-flex* booklet (T-F 8). Order from your nearest L·O·F Distributor. *®

Libbey·Owens·Ford Glass Co.,
9343 Nicholas Bldg.,
Toledo 3, Ohio



L·O·F GLASS · PLASKON · FIBER-GLASS

LIBBEY • OWENS • FORD GLASS COMPANY

▲ For more details circle **NED-819 D3** on enclosed inquiry slip ▲

IT'S HERE . . . *positive power transmission —without lubrication!*

Now Available in STANDARD STOCK DRIVES

During the past six years, original equipment manufacturers have found in custom-engineered "Timing" Belt drives a means of simplifying and improving their products' design and performance. Now the *same* advantages can be applied by plant engineers to various individual drives at a cost competitive with other methods of power transmission. A wide range of Gilmer *Standard* "Timing" Belts and matching pulleys are now—or soon will be—available from local distributors' stocks.

Wherever slippage or drive lubrication presents a problem, or the saving of space or weight is important, consider these unique features of the "Timing" Belt drive:

CAN'T SLIP—Positive engagement of the "Timing" Belt's teeth with axially-cut pulley grooves assures no slippage, no creep, no power loss, precision control of speed ratio.

STRONG, LIGHT, FLEXIBLE—A single layer of continuously-wound, neoprene-encased, steel cable of high tensile strength gives the "Timing" Belt highest strength-to-weight ratio, with extreme flexibility. No stretch; no take-up. Range: 1/100 to 300 hp.

NO INITIAL TENSION—Teeth, not friction, provide the grip . . . reducing bearing loads and eliminating need for outboard bearings.

NO LUBRICATION—Absence of metal-to-metal contact eliminates need for lubricants, lubricating devices and housings. High Speeds cause no lubricating problems.

ULTRA COMPACT—Very small pulleys can be used without slippage, permitting very short centers and high ratios.

SPEED RANGE—Operates without slippage at speeds of inches per day to 15,000 rpm. Mechanical efficiency is very close to 100%.

Ask your local NYB&P Distributor for a copy of the Gilmer "Timing" Belt STANDARD DRIVE MANUAL or use the request form to obtain a copy of the Manual and location of nearest stock-carrying distributor.

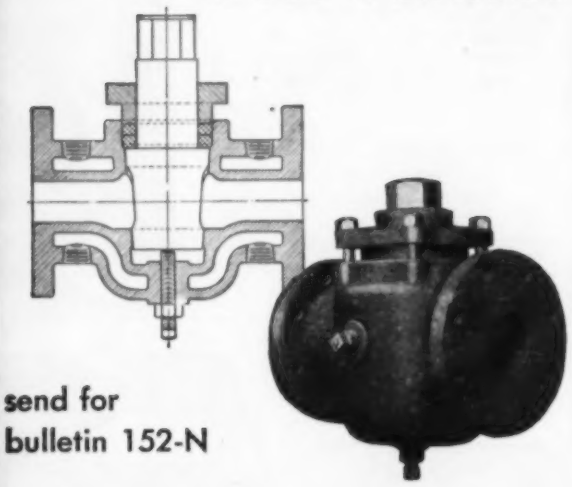
NYB&P NEW YORK BELTING & PACKING CO.
America's Oldest Manufacturer of Industrial Rubber Products

▲ For more details circle **NED-820 D3** on enclosed inquiry slip ▲

Now—

JACKETED FITTINGS

in *Ni-Resist*



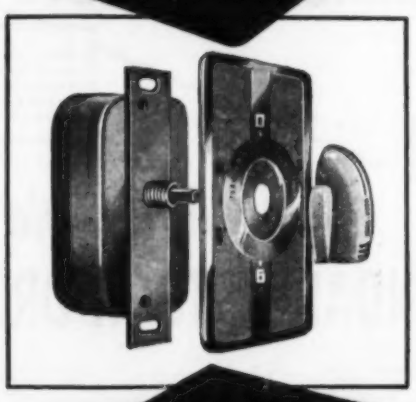
send for bulletin 152-N

Parks-Cramer Company

FITCHBURG, MASSACHUSETTS

▲ For more details circle NED-821 D3 on enclosed inquiry slip ▲

MARK-TIME "9000" Wall Time Switch



turns current off or on WHEN YOU'RE NOT THERE!

This Mark-Time switch is a good deal more than a great convenience . . . it saves you money! Because it remembers to turn the current off or on when you're not there to do it!

"9000" automatically controls circuits of store window lights, neon signs, hall and garage lights, attic fans, farm lighting systems . . . dependably turning them on or off at the time you set.

"9000" is easily mounted in any standard rectangular wall box. Movements only available for home or industrial heating controls.

Write today for full details and prices.

SPECIFICATIONS

Time ranges from 3 minutes to 12 hours. Rated at 20 ampere, 125 volt, 1 HP or 10 ampere, 250 volt operation, AC only. Available for either ON or OFF type operation. Hold feature also available — at HOLD position, current is ON, but timing mechanism does not operate until knob is turned from HOLD to a time period.

MARK-TIME

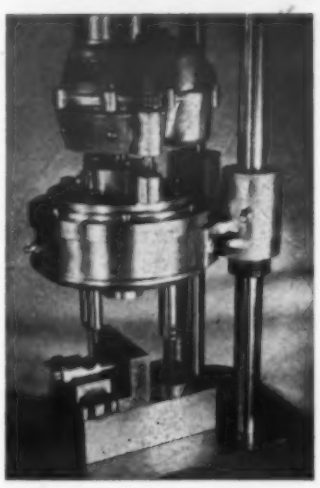
M. H. RHODES, INC.

HARTFORD, CONNECTICUT

Manufactured and sold in Canada by SPERRY GYROSCOPE OTTAWA, Limited 3 Hamilton St., Ottawa, Ontario, Canada

▲ For more details circle NED-822 D3 on enclosed inquiry slip ▲

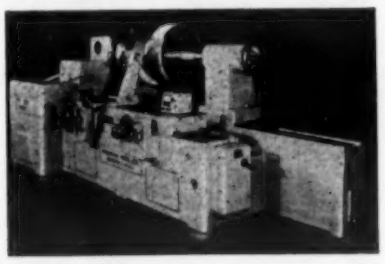
MULTIPLE TAPPING UNIT attaches to any drill press



Lead screw protection for multiple tapping of two or more small holes is provided by the Ettco-Emrich multiple tapping unit for any drill press. This is possible even though tap sizes, pitches, or both, are not the same. Unit consists of a reversing head, three-spindle multiple head and a fixture. It taps two 0-80 holes in aluminum. Lead screw, having a fast pitch, runs slower than the taps and is completely enclosed during operation. Made by **Ettco Tool Co.**, 573 Johnson Ave., Brooklyn 37, N. Y.

▲ For more details circle NED-823 D3 on enclosed inquiry slip ▲

GEAR LEAD CHECKER for lead and axial pitch on gears from 18 to 48-in. OD

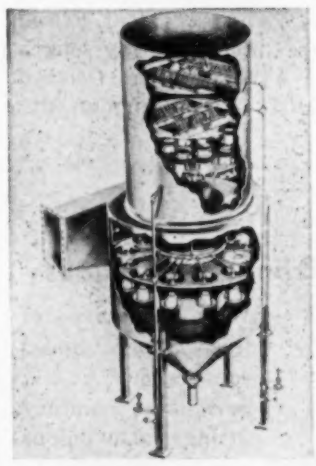


Both lead and axial pitch on helical or herringbone gears from 18 to 48-in. OD, with maximum face width of 25 in. and shaft length of 96 in., are checked by the Sine-Line model 1248 lead checker. Either right or left hand leads can be checked. Machine uses sine bar principle to check leads from 0 to 80 in. No change in mounting of gear is required, and gears of varying face widths or diameters, but with the same lead, may be checked without changing sine bar setting. Either manual or power drive is used.

Machine consists of transverse table carrying sine bar and longitudinal table which carries indicator. Former moves crossways at same time latter moves lengthwise, parallel to axis of gear being checked. When moved back and forth, sine bar table rotates spindle upon which gear is mounted. Adjustable sine bar determines relationship between movement of indicator table and rotation of gear being checked. Made by **Michigan Tool Co.**, 7204 E. McNichols Rd., Detroit 12, Mich.

▲ For more details circle NED-824 D3 on enclosed inquiry slip ▲

MULTIPLE-ACTION SCRUBBER in capacities of 1500 to 48,000 cfm provides stack dust control



Six scrubbing stages in type V Liquid Precipitator stack dust control unit provide multiple-action necessary where high dust loadings create a serious nuisance. This unit is especially adapted to control of dust from rotary dryers, cyclones, kilns, roasters, mixers and pulverizer exhausts. It is also applicable to stacks of asphalt, chemical and similar industrial plants.

Available in capacities of 1500 to 48,000 cfm, units are designed to handle high temperature gases. Low draft loss prevents overloading of fan equipment, and low water requirements are beneficial to plants where water is scarce or expensive. Connections can be made to existing duct work, and the entire unit is compact and easily relocated.

Dust removed from gas is reduced to watery sludge which can be discharged to tank or pond, and a recirculation system can be employed. Additional scrubber stages can be used for increased capacity, and precipitator elements can be adapted to varying conditions. Use of Compound M enables system to wet dusts which ordinarily repel water. Compound also speeds water clarification in sludge pond or settling tank. Made by **Johnson-March Corp.**, Dept. NED, 1724 Chestnut St., Philadelphia 3, Pa.

▲ For more details circle NED-825 D3 on enclosed inquiry slip ▲

NEW

Portable, Hydraulic "GUILLOTINE"

CUTS 1¼" WIRE ROPE!

Guillotine Model 10A with Integral Hand Pump

Tremendous cutting power . . . 22½ tons thrust!

Light weight . . . only 45 lbs. net. Take the tool to the job.

Positive blade retraction . . . will not jam.

Easy hand pump action.

ALSO AVAILABLE WITH

Electric or Compressed Air operated pump

Automatic, power-operated pump assemblies available that are also portable or may be permanently mounted for production application. Special high-power pump available for production cutting over 200 cuts per hour.

Write For Catalog. Dept. NED-4

MANCO MFG. CO.

BRADLEY, ILLINOIS

▲ For more details circle NED-826 D3 on enclosed inquiry slip ▲

GUARANTEED GUARANTEED GUARANTEED GUARANTEED

PROVEN... INDUSTRIAL STACKED RETAINING RINGS

Proven success is the only success . . . and Industrial Stacked Retaining Rings have been adopted successfully by leading manufacturers in the country. Why? —Because they save time, labor and money. They're *guaranteed* to do the same for you by Industrial Retaining Ring Company . . . originators of stacked open-type retaining rings. Industrial's specially designed base and tool are free with initial order.

Write today for our illustrated brochure.

INDUSTRIAL RETAINING RING CO.

originators of Modern Dispensing

8 WEST SIDNEY AVENUE • MOUNT VERNON 1, NEW YORK

▲ For more details circle NED-827 D3 on enclosed inquiry slip ▲

NEW *PANALARM* "50"

. . . simple, plug-in signal system . . .

ALL your signal requirements are fulfilled by a single PANALARM "50". This combined audio-visual system is self-contained, prewired, easily installed. New features permit circuit changes without re-wiring. New instrument-type construction gives maximum dependability and service.

All moving parts and contacts are within hermetically sealed, corrosion-proof, plug-in units. Additional signals are merely plugged in.

PANALARM "50" . . . available with backlighted nameplates or bullseye lamps . . . for 3 to 54 signals.

Write for Informative Catalog 100.

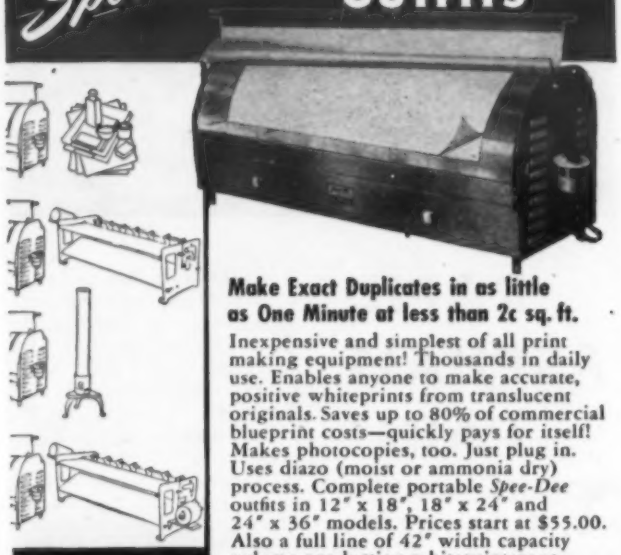
PANALARM

PANALARM PRODUCTS, INC.

6312 N. Broadway, Chicago 40, Illinois

▲ For more details circle NED-828 D3 on enclosed inquiry slip ▲

AMAZING! the Time and Money Saved WITH Spee-Dee WHITEPRINT OUTFITS



Make Exact Duplicates in as little as One Minute at less than 2c sq. ft.

Inexpensive and simplest of all print making equipment! Thousands in daily use. Enables anyone to make accurate, positive whiteprints from translucent originals. Saves up to 80% of commercial blueprint costs—quickly pays for itself! Makes photocopies, too. Just plug in. Uses diazo (moist or ammonia dry) process. Complete portable *Spee-Dee* outfits in 12" x 18", 18" x 24" and 24" x 36" models. Prices start at $55.00. Also a full line of 42" width capacity volume production whiteprinters at moderate prices.

10 DAY FREE TRIAL

Send today for Free Spee-Dee Brochure

PECK & HARVEY

Mfrs. of Whiteprint, Blueprint & Photocopy Equipment

5638 NORTH WESTERN AVE., CHICAGO 45, ILLINOIS

▲ For more details circle NED-829 D3 on enclosed inquiry slip ▲

ONE MAN AND A Lincoln AUTO-SCRUBBER

CLEANS MORE FLOOR SPACE THAN AN ENTIRE CREW OF SCRUBBERS AND MOPPERS!

Above: floor cleaning at well known manufacturer of office appliances with a Lincoln 500 AUTO SCRUBBER that cleans floors better in one-tenth the time at one-fourth the previous cost. Write DEPT. 4-53 for details.

$AVE UP TO 75% ON FLOOR SCRUBBING!

★ Without cost or any obligation whatever, our local floor maintenance specialist in your territory will survey your present methods and submit specific recommendations to insure substantial savings.

There is a recommended LINCOLN for every floor cleaning operation. Ask for a FREE Demonstration

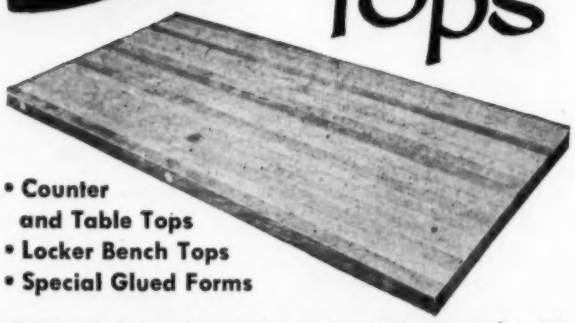
The LINCOLN FLOOR SCRUBBER AND POLISHER

Lincoln-Schlueter FLOOR MACHINERY COMPANY 1256 WEST VAN BUREN ST., CHICAGO 7, ILLINOIS — MORE THAN 55 YEARS OF SERVICE

World's Manufacturer of the Most Complete Line of Floor Maintenance Equipment

▲ For more details circle NED-830 D3 on enclosed inquiry slip ▲

HARDWOOD LAMINATED Bench Tops



- Counter and Table Tops
- Locker Bench Tops
- Special Glued Forms

FROM the drying of the lumber in Sensenich's own kilns* to the cutting, forming and gluing of every hardwood laminated top, the highly trained Sensenich craftsmen play an important part. These skilled workmen use the finest equipment to produce high quality wood parts with thorough efficiency and economy. Remember too, Sensenich is the world's largest producer of wood propellers for personal planes. Sensenich has more than 20 years experience in conditioning, cutting and gluing wood forms to the most exacting standards.

We will be glad to quote on your requirements . . . your request will receive prompt attention.

SENSENICH AIRCRAFT PROPELLER

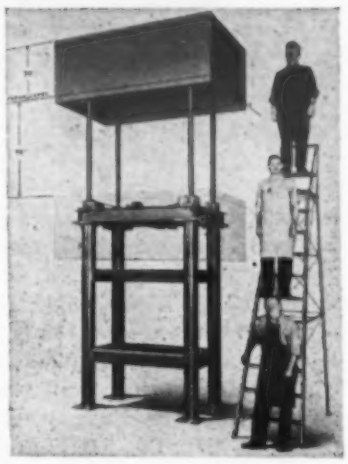
*Certified by the United States Air Force

SENSENICH CORPORATION

Dept. ND, Lancaster, Pennsylvania

▲ For more details circle NED-831 D3 on enclosed inquiry slip ▲

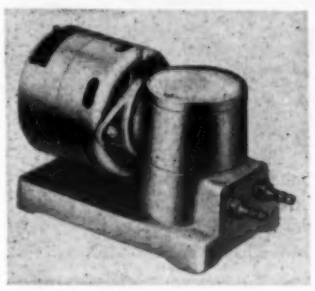
ELEVATING PLATFORM
designed with 78-in. lift



The 48 x 84-in. table of this basement-mounted Portelvator is pushbutton operated for a total vertical travel of 78 in. Load capacity is 3 tons. Designed to receive sheeted materials coming from the delivery end of a machine, it is operated by a 2-hp motor and reversing magnetic starter. In operation, a skid is positioned on the platform which is raised to its maximum height of 30 in. above floor level. As sheets are received on the skid, it is lowered until it reaches its extreme low position, 48 in. below floor level. It is then returned to floor level and the loaded skid is removed by fork truck. Portelvator made by **Hamilton Tool Co.**, 901 Hanover, Hamilton, O.

▲ For more details circle NED-832 D3 on enclosed inquiry slip ▲

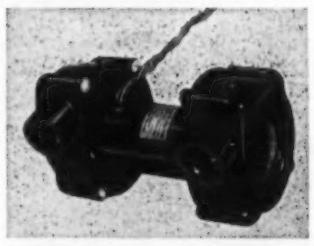
SUCTION/PRESSURE PUMP
small diaphragm actuation type



High speed of the Dynapump motor smoothes out pulsations on both suction and pressure cycles for effective use with gas analyzers, gas detectors, filtering equipment and other uses. It is diaphragm - actuated and therefore gages are not contaminated by oil. Motor of the 4½-lb unit is rated at 1/70-hp. Pump capacity is 225 cu in. at 2 psi, maximum pressure is 10 psi and maximum suction is 12 in. mercury. Change from suction to pressure use is by changing from one hose connection in base to the other. Distributed by **Henry A. Gardner Laboratory, Inc.**, 4724 Elm St., Bethesda 14, Md.

▲ For more details circle NED-833 D3 on enclosed inquiry slip ▲

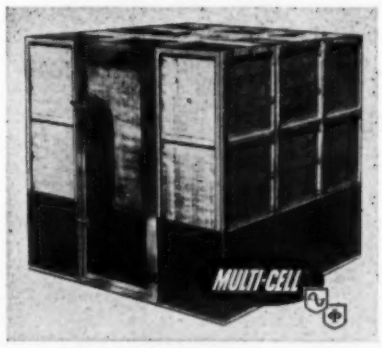
MINIATURE BLOWER
for cooling and ventilating uses



Particularly suited for cooling various types of electronic equipment, type BC1615B-12 miniature blower delivers 22 cfm of air and operates on 115-v 60-cycle ac. It weighs 26 oz and is designed to operate in temperature range from −65 to 85° F. Compactly designed, it has dynamically balanced rotating parts and precision shielded ball bearings. Made by **Induction Motors Corp.**, 55-15 37th Ave., Woodside 77, N. Y.

▲ For more details circle NED-834 D3 on enclosed inquiry slip ▲

SHIELDING ROOM
prevents static interference

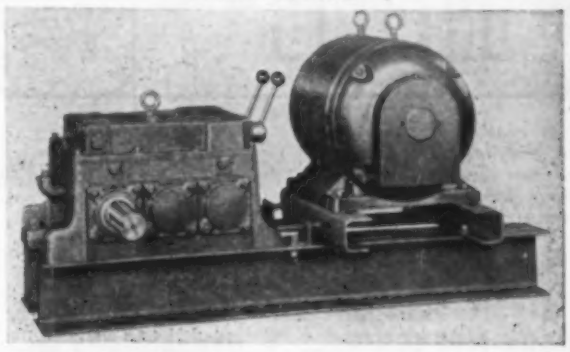


Available in variety of sizes and types, Multi-cell shielding rooms facilitate the testing of electrical and electronic equipment for the evaluation of sensitivity, calibration, rf interference, susceptibility, spurious radiation, spurious response, quality control and similar phenomena. They comply with most military specifications. Types available include double shield, multiple cell type; double shield, isolated cell type; and single shield type. Features include silver plated phosphor bronze contact strips between door seams, panels of protective hardboard around all critical areas of panels and doors, air conditioning duct entry and filter panels with six wave-guide type attenuators for power live entry. Rooms can be assembled or disassembled easily. Made by **Shielding, Inc.**, Norman Ave., Riverside Park, N. J.

▲ For more details circle NED-835 D3 on enclosed inquiry slip ▲

TURNER 4-SPEED Transmission *from fractional HP through 60 HP*

TURNER MOTOR ▼



Here is the answer to many power transmission problems. A four speed transmission in sizes from fractional HP through 60 HP. For use with any speed electric motor or engine. Available in a wide range of speed ratios including certain six and nine speed transmissions.

WRITE US TODAY — OUTLINE THE DESIRED OUTPUT SPEEDS, SIZE AND SPEED OF MOTOR OR ENGINE. A BRIEF DESCRIPTION OF YOUR PROBLEM AND WE WILL FORWARD COMPLETE DETAILS.

TURNER UNI-DRIVE CO.

3420 Terrace Street Kansas City 8, Mo.

▲ For more details circle NED-836 D3 on enclosed inquiry slip ▲

Let us Prove . . .

★ *Faster cutting, even on hardened steel or abrasive surfaces!*

★ *Superior finishes!*

★ *Increased production and reduced tool costs!*

Job-engineered for greater production profits!

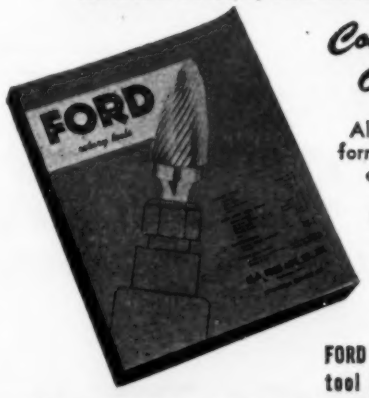
FORD

solid CARBIDE END MILLS

On-the-job tests of FORD solid carbide end mills confirm their superiority! Greater rigidity, job-engineered spiral flutes and cutting edges, and close tolerances all contribute to faster, better production and lower costs. Sizes to ½". See new catalogue No. 207.

FORD -- *the complete line!*

HSS ground cutters, rotary files, countersinks
CARBIDE cutters, end mills, grinding burs



Complete Details, Operating Data

All specifications, plus informative operational data on more than 300 FORD stock rotary tools contained in new FORD catalogue No. 207, just released. Send for YOUR copy.

FORD regrinding service adds new tool life, reduces tool costs!

M. A. FORD MFG. CO., INC.

Pioneers in rotary tools for more than 30 years

DAVENPORT 2, IOWA

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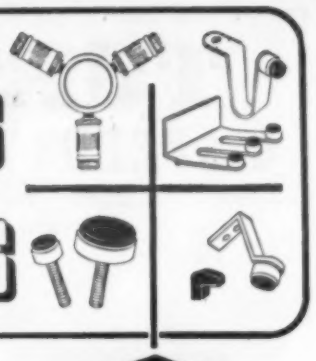
SILVER GRAPHALLOY
BRUSHES
AND
CONTACTS



...for applications requiring low electrical noise, low and constant contact drop, high current density and minimum wear.

GRAPHALLOY
TRADE MARK REG. U. S. PAT. OFF.

EXTENSIVELY USED IN
SELSYNS • ROTATING THERMOCOUPLE and STRAIN-GAGE CIRCUITS • ROTATING JOINTS GUN-FIRE CONTROLS • DYNAMOTORS etc.

Wide range of grades available for standard and special applications.
Brush holders and coin silver slip rings available for use with Silver Graphalloy Brushes.
Write us for Data Sheets and further information. Outline your problem and we will apply our "40 years' experience" toward its solution.

OTHER GRAPHALLOY PRODUCTS:
Oil-free self-lubricating Bushings and Bearings, Oil-free Piston Rings, Seal Rings, Thrust and Friction Washers, Pump Vanes.

GRAPHITE METALLIZING CORPORATION
1030 NEPPERHAN AVE • YONKERS, NEW YORK

For more details circle NED-838 D3 on enclosed inquiry slip

The Finest ELECTRICAL CONNECTOR MONEY CAN BUY!

SCINFLEX ASSURES YOU PEAK PROTECTION AGAINST CIRCUIT FAILURE

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of −67°F to +275°F. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

• Moisture-Proof • Radio Quiet • Single Piece Inserts • Vibration-Proof • Light Weight • High Insulation Resistance • High Resistance to Fuels and Oils • Fungus Resistant • Easy Assembly and Disassembly • Fewer Parts than any other Connector • No additional solder required.

BENDIX SCINFLEX
ELECTRICAL CONNECTORS

Bendix
SCINTILLA MAGNETO DIVISION of Bendix AVIATION CORPORATION
SIDNEY, NEW YORK

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.
FACTORY BRANCH OFFICES: 118 E. Providencia Ave., Burbank, Calif. • Stephenson Bldg., 6560 Cass Ave., Detroit 2, Michigan • Brouwer Bldg., 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • 582 Market Street, San Francisco 4, California

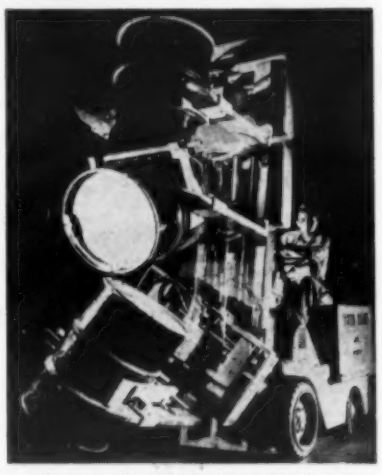
For more details circle NED-839 D3 on enclosed inquiry slip

VARIABLE PITCH SHEAVE
is of integral shaft design

Suitable for application wherever an outboard bearing is employed, rigidly constructed integral shaft type motion control Vari-Pitch sheave unit is easily installed and replaced. Sheave disks of the integral shaft type unit are assembled directly on a finished shaft. With all sheave units in the back lineshaft the same length, one sheave unit can be replaced with another in a short time. Shaft extensions up to 4¾ in. diameter are possible. Sheave can be remotely controlled by pilot motor or manually controlled by mechanical means. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

For more details circle NED-840 D3 on enclosed inquiry slip

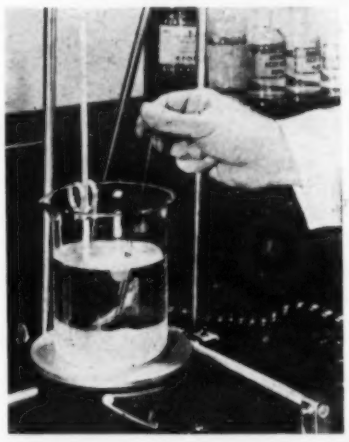
VERSATILE FORK TRUCK
4000-lb unit handles various loads



A semipermanent revolving head, drum clamps, hydraulic drum upender and clamp-spikes, all detachable in two minutes, are attachments used with the Octopus fork truck which enable it to handle a wide variety of loads. Battery-powered unit has 4000 lb capacity and is equipped with Baker four-purpose carriage. Load is handled non-stop, with just two short pauses for adjustment to carriage and forks. Truck can handle pallets of various sizes; side-shift to spot loads; haul and stack drums, rolls and tote boxes; empty drumloads by hydraulically tilting in vertical plane; or handle bales of cotton and crude rubber. Made by **Baker-Raulang Co.**, Baker Industrial Truck Div., 1245 W. 80th St., Cleveland 2, O.

For more details circle NED-841 D3 on enclosed inquiry slip

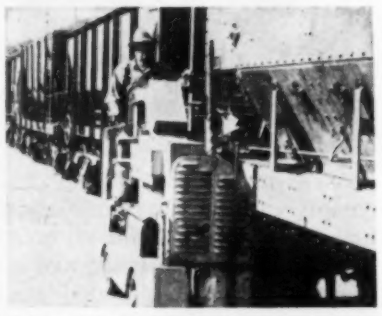
THERMOMETER CLAMP
holds thermometer upright in beaker



Laboratory thermometers as well as glass stirring rods and metal electrodes are held upright against the inner side of beakers by this Thermo-clamp even when solution in beaker "bumps." Made of corrosion-resistant stainless steel, clamp is 1-in. diameter by ¾-in. wide and has just enough tension to hold thermometer firmly without damaging it. Once clamp is attached to the lip of any beaker, Thermometer can be adjusted to any height. Made by **Fisher Scientific Co.**, 715 Forbes St., Pittsburgh 19, Pa.

For more details circle NED-842 D3 on enclosed inquiry slip

HOPPER CAR CLOSER
also opens bottom gates easily



Opening and closing of bottom gates in hopper cars is facilitated without physical exertion by this special purpose truck. The job, which formerly required two-man crews using heavy tools, is performed safely in less time with the truck. A wrench on the truck is moved horizontally to engage the opening and closing mechanism on the rail car (see arrow). Wrench is then powered to crank the gates open or closed. Made by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 3, O.

For more details circle NED-843 D3 on enclosed inquiry slip

RAPID ASPHALT PAINT
PROTECTS AGAINST MOISTURE, ACIDS AND CORROSION

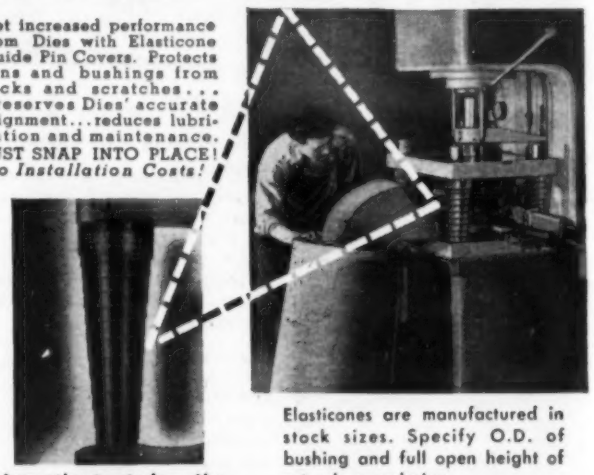
A quick-drying, glossy black coating. High insulating and moisture-proof qualities. A "must" for equipment that is constantly exposed to acid fumes or dampness. In six sizes from one pint cans to 55 gallon barrels. Applied by brush or spray—quickly dries to lacquer-like hardness. For metal, wood, masonry, coated fabrics, etc. For literature, write The Ruberoid Co., 500 Fifth Ave., New York 36, N.Y.

The RUBEROID Co.
ASPHALT AND ASBESTOS BUILDING MATERIALS

For more details circle NED-844 D3 on enclosed inquiry slip

DIE LIFE INCREASED 25% with ELASTICONE GUIDE PIN COVERS

Get increased performance from Dies with Elasticone Guide Pin Covers. Protects pins and bushings from nicks and scratches... preserves Dies' accurate alignment...reduces lubrication and maintenance. JUST SNAP INTO PLACE! *No Installation Costs!*



Elasticones are manufactured in stock sizes. Specify O.D. of bushing and full open height of set when ordering.

Investigate today the many new cost-saving engineering advantages in die designing with Elasticones.

Write for full information and literature.

CENTRAL
2208 EAST HUNTINGDON ST. PHILA. 25, PA.
CENTRAL SAFETY EQUIPMENT COMPANY

For more details circle NED-845 D3 on enclosed inquiry slip

MYSTIK BRAND TAPES • SELF-STIK
Protecto-Mask
eliminates costly refinishing!

Highly polished surfaces on aluminum, stainless steel, plastics, glass . . . metals and materials of all kinds . . . *must* be protected from costly scratches, in fabrication, storage, shipment.

MYSTIK® Brand Protecto-Mask is *self-stik* . . . easily applied directly from the roll for a tough, scuff-resistant "skin." Adheres instantly, yet peels off easily without leaving residue. Can also be used for layout and diagramming.

WRITE TODAY for information and samples. Mystik Adhesive Products, 2657 North Kildare Ave., Chicago 39.

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For more details circle NED-846 D3 on enclosed inquiry slip

FOR Easier Wiring

Square D OIL-TIGHT PUSHBUTTON STATIONS

with "Slide & Swing" HINGE COVERS

"Slide & Swing" for easier wiring. Hinge pins can be quickly slipped out to remove cover when installing units.

Write for Bulletin 9001 Type T. Address Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin.

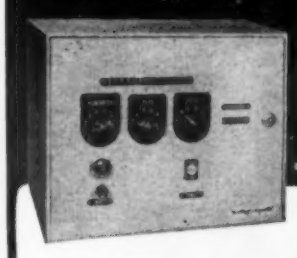
ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

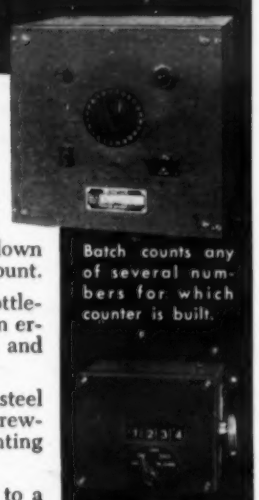
For more details circle NED-847 D3 on enclosed inquiry slip

Count BATCHES Automatically

Amazingly easy to use
Completely dependable



Batch counts any quantity



Batch counts any of several numbers for which counter is built.

Monitor Automatic Batch Counters count predetermined quantities and automatically control packaging, diverting and batch marking devices without slowing down production or missing a single count.

Save labor—avoid production bottlenecks—eliminate element of human error—stop under-count complaints and over-count losses.

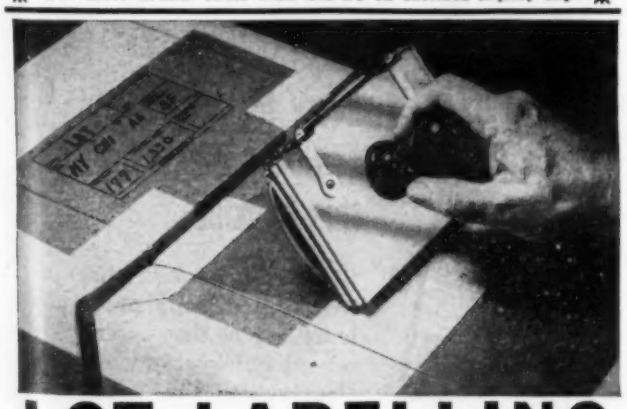
Successfully used for years in steel and paper mills, factories and breweries, can, carton, bottle cap, printing plants, etc.

Made in many types adaptable to a tremendous range of service requirements. Ask your PIC Representative or send for case histories and catalog.

Counts batches of 100, 500, 1000, 5000, 10,000. Other types available—tell us what you want to accomplish or send for catalog.

PRODUCTION INSTRUMENT COMPANY
700-12 W. Jackson Blvd., Chicago 6, Ill.

For more details circle NED-848 D3 on enclosed inquiry slip



LOT LABELLING

for Storage or Shipment Made Faster . . More Accurate . . Cheaper!

Faster than pasted labels . . faster than stencil and brush. Print direct . . 1000 or more clear, sharp copies without re-inking. Prints practically anywhere . . postcards, tags, labels, boxes, cartons, packages, menus, forms, letters . . paper, cloth, wood. Just type, write, trace or draw on inexpensive stencil . . snap it on duplicator . . and print—like using a rubberstamp. New precie-cut "FORM-CUT" stencil prints shipping form and identification data in one operation.

THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

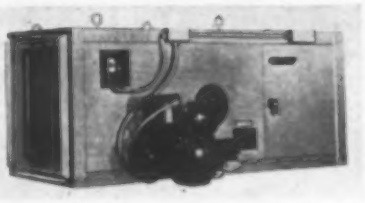
Portable . . non-mechanical . . of non-corrosive metal . . replaceable ink pads. 8 complete outfits: $9.50 to $99.50, including supplies (f.o.b. factory). Write for literature or see your office or shipping room supply dealer.

OVER 30 YEARS

MULTISTAMP STENCIL DUPLICATOR

For more details circle NED-849 D3 on enclosed inquiry slip

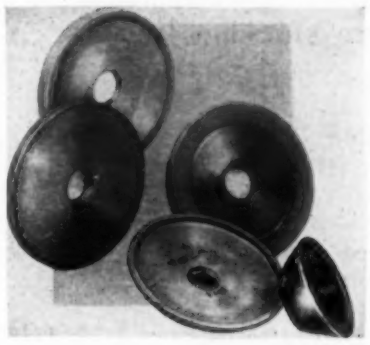
WARM AIR FURNACES
three new sizes of suspension type



Outputs of 112,000, 100,000 and 80,000 Btu are ratings of three suspension type warm air furnaces added to the J-C line. They can be arranged singly or in batteries where space is at a premium and can be adapted to summer air conditioning by connecting with refrigeration units. Furnaces measure 61, 58 and 55 in. long, respectively, and all are 23 in. high and 26 in. wide. Larger unit has a 10-in. blower, while the other two have 9-in. blowers. Made by **Jackson & Church Co.**, 323 N. Hamilton Ave., Saginaw, Mich.

For more details circle NED-850 D3 on enclosed inquiry slip

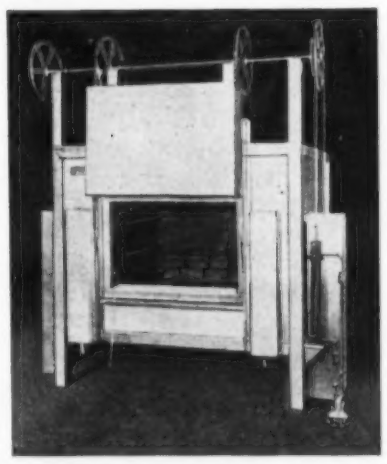
DIAMOND WHEELS & HONES
are free-cutting and durable



Wide range of sizes and styles comprises Star Dust line of diamond wheels and hones. Carefully graded, high quality diamonds are securely bonded to assure efficient operation. Bond is hard enough to hold the abrasive properly, yet dissipates at a rate designed to keep the abrasive surface even at all times. Wheels and hones are free-cutting, durable and have minimum of loading. Made by **Ace Abrasive Laboratories**, 250-D W. 57th St., New York 19, N. Y.

For more details circle NED-851 D3 on enclosed inquiry slip

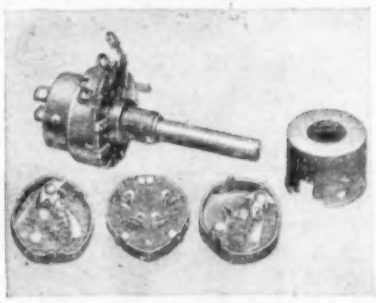
ELECTRIC FURNACE
for enameling and heat treating



The 48 x 36 x 24-in. chamber size of model TF-24 Globar type electric furnace makes it suitable for handling large items or quantities of smaller items for such operations as porcelain enameling, drying or heat treating. It operates at 2400° F with work load of 350 lb of metal per hour. Globar elements set on each side provide rapid "recovery" when the counterbalanced door is opened. Hearth is either solid SiC tile or triangular rails. Furnace has a 60 kva voltage-regulating insulated type transformer and requires 60-kw, 440-v, 60-cycle three-phase power. Made by **Pereny Equipment Co.**, Chambers & Pereco Rds., Columbus 12, O.

For more details circle NED-852 D3 on enclosed inquiry slip

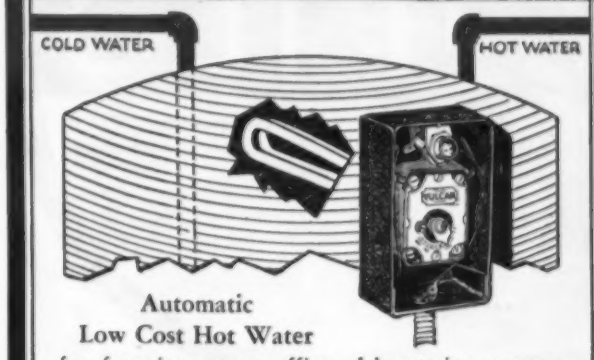
MINIATURE SWITCHES
for variable composition resistors



Miniature switches for attachment to type LP and LR or other standard variable composition resistors have only 7/8-in. diameter and 9/32-in. depth, exclusive of terminals. A-10 double-pole single-throw switch is rated at 3 amp 125 v or 1 amp at 250 v ac-dc and is suited for small battery-operated radio receivers or similar uses. Type A-15, rated 1 amp at 125 v ac-dc, is similar except for lower rating and low torque feature. Heavier currents can be handled by the A-11 switch, rated 3 amp at 125 v dc or 5 amp at 125 v ac. It is offered with or without a dummy terminal. All contact surfaces are silver plated. Made by **Stackpole Carbon Co.**, Dept. NED, St. Marys, Pa.

For more details circle NED-853 D3 on enclosed inquiry slip

VULCAN
ELECTRIC IMMERSION
Thermostat Control HEATERS



Automatic
Low Cost Hot Water

for factories, stores, offices, laboratories, summer camps, and similar places.

Packaged unit includes thermostat, pilot light and switch. Simply screw in tank through 1 in. threaded flange, connect to AC power, and set thermostat for desired temperature. Special types for heating oils, chemicals and other liquids.

VULCAN ELECTRIC COMPANY
DANVERS 7, MASS.

Makers of Vulcan Electric Soldering Tools, Electric Solder Pots, Electric Glue Pots, Electric Branding Irons and Electric Heating Units.

For more details circle NED-854 D3 on enclosed inquiry slip

Tests prove NE "Lo-Loss" Feeder Busway has lowest energy loss per 100 foot run. Power experts agree it's the finest in the field for long runs—either vertical or horizontal—in plants, factories and large office buildings.

You get these BIG features—

- Designed for current transmission up to 4000 amperes at 600 volts or less.
- Easy to install because single bolt connectors are used to join sections. Joints are silver-plated.
- Compact—Requires only 50% of the area needed for conduit and cable installations.
- On vertical installations, exclusive self-contained insulator support frame carries entire weight of bus bars *independent of housing.*
- Simple, accessible bolted connections which allow for quick and easy installation.
- Bus bars insulated with Fibron plastic tape. High dielectric strength and heat resistance.

NE "PLUG-IN" BUSWAY

Plug-in openings, staggered on two sides, permit insertion of devices convenient to equipment.

Listed by Underwriters' Laboratories, Inc.
Write for complete details

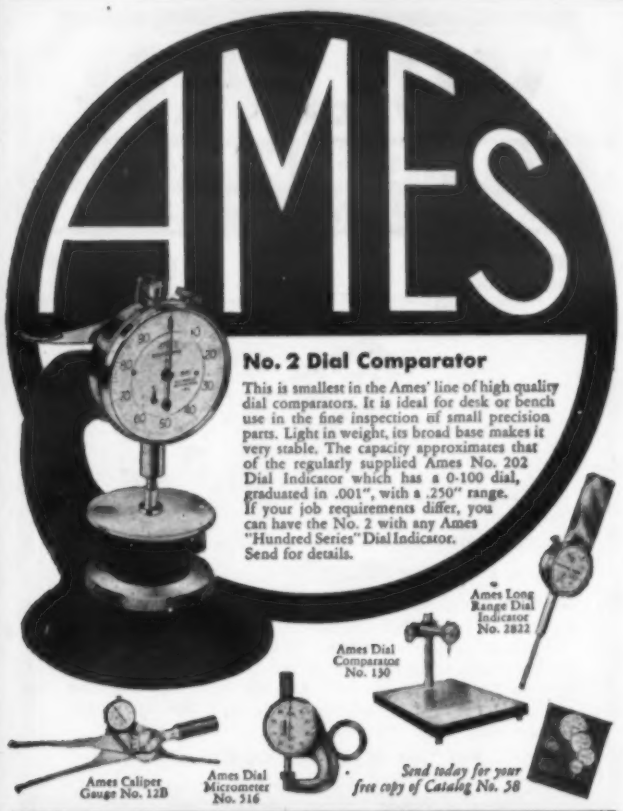
EVERYTHING IN WIRING POINTS TO

National Electric Products
PITTSBURGH, PA.
3 Plants • 7 Warehouses • 34 Sales Offices

W-2929

For more details circle NED-855 D3 on enclosed inquiry slip

AMES



No. 2 Dial Comparator

This is smallest in the Ames' line of high quality dial comparators. It is ideal for desk or bench use in the fine inspection of small precision parts. Light in weight, its broad base makes it very stable. The capacity approximates that of the regularly supplied Ames No. 202 Dial Indicator which has a 0-100 dial, graduated in .001", with a .250" range. If your job requirements differ, you can have the No. 2 with any Ames "Hundred Series" Dial Indicator. Send for details.

Send today for your free copy of Catalog No. 58

Representatives in principal cities B. C. AMES CO. *34 Ames Street Waltham 54, Mass.*

Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle **NED-856 D3** on enclosed inquiry slip ▲

UE

TEMPERATURE PRESSURE CONTROLS

Improve YOUR PRODUCT!

More dependable, more accurate controls bring big sales results!

Type E8N
Indicating Temperature Control, ranges 300° or 600° between −150° to 600° F. calibrated adjustment and ambient compensated.

Type J40
Compact, skeleton pressure control for local mounting to control up to 250 psi in general industrial applications.

Type J96
Sensitive pressure-vacuum control for 30" hg. to 100 psi with explosion-proof housing for hazardous locations.

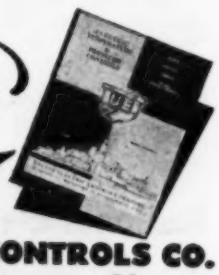
Progressive manufacturers throughout the country know the importance of having the *right* temperature or pressure control on their products. It really pays off—in product quality and in SALES. Hundreds of companies, of all types, turn to United Electric for the finest controls, to be used as original equipment on their products.

Controls are developed from United's wide line of standard models or are specially built as a result of teamwork by United Electric engineers and the manufacturer's product development group.

We can handle practically any pressure control problem between limits of 30" mercury vacuum to 1000 psi or temperature control problems between limits of −150° F. to 600° F.

Want to know more? Write for our new catalog. It shows pressure and temperature controls for marine, industrial aircraft and representative special purpose uses. And it's yours for the asking.

Write for New free Catalog...



UNITED ELECTRIC CONTROLS CO.
84-N School Street, Watertown, Mass.

▲ For more details circle **NED-857 D3** on enclosed inquiry slip ▲

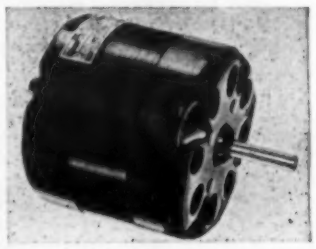
PARTS STORAGE CABINET
is drawer unit for small parts

Each drawer of the Little Gem small parts storage cabinet measures 11 x 11 x 1¼ in. and accommodates up to 28 adjustable compartments. It is designed for use individually, in stacks, under counters or on shelving. Front of compartment is curved for easy withdrawal of parts, and overhang at rear prevents shuffling of items when drawer is jerked open or slammed shut. Label holder identifies each compartment. Made by **Aurora Equipment Co.,** Equipto Div., 690 Prairie St., Aurora, Ill.

▲ For more details circle **NED-858 D3** on enclosed inquiry slip ▲

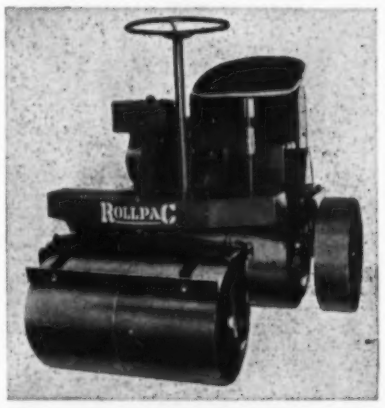
FAN DUTY MOTOR
made in three stacking lengths

Model No. 4400 shaded-pole motor, designed for fan duty in refrigeration and air conditioning systems, is offered in three stacking lengths. Full load and no load speeds of the 1.0, 1.5 and 2.0-in. stack motors are 1400 and 1750 rpm, respectively. Ratings are 1/25, 1/14 and 1/11-hp and stalled torques are 8, 16 and 25 oz-in. All operate on 115 v. Temperature rise on fan duty with delivery away from motor is 55° C. Made by **Howard Industries, Inc.,** 1217 State St., Racine, Wis.



▲ For more details circle **NED-859 D3** on enclosed inquiry slip ▲

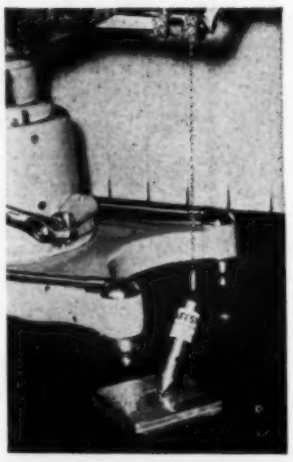
SMALL POWER ROLLER
powered by air-cooled engine



Working flush with curbing or walls in rolling industrial driveways, parking areas and in plants is possible with outside detachable pressure edger wheel. Its use eliminates need for finishing by hand. Wheel is same diameter as rear roller and slips on stub axle easily. It is removable when not in use. This Rollpac power roller weighs 980 lb, but can be water loaded to 1888 lb or sand loaded to 2360 lb. Power is provided by Briggs & Stratton gasoline engine through Maxitorq double clutch to give speed of 1 to 2.4 mph. List price of roller is $895 and of edger, $80. Made by **Soilaire Industries,** 1200 Second Ave. S., Minneapolis 3, Minn.

▲ For more details circle **NED-860 D3** on enclosed inquiry slip ▲

EQUIPMENT GROUNDING DEVICE
minimizes shock, explosion hazards



Contact of various equipment with conductive floors is made by 7 x 7-in. metal plate of the Safestat anti-static device, while 3-lb tension weight, in canted position, maintains constant pull on chain attached to the equipment. Effective grounding of equipment in areas where explosion hazards exist is thus assured. Chain attaches to any part of equipment at desired tension to eliminate drag. Product features 250,000 ohm resistor to prevent electrical shock even if an exposed wire touches contact plate. If plate is kicked or moved, tension weight pulls it back in position, and when equipment is moved, device slides with it, retaining contact. Made by **Walter G. Legge Co.,** Dept. NED, 101 Park Ave., New York 17, N. Y.

▲ For more details circle **NED-861 D3** on enclosed inquiry slip ▲

Small precision metal parts... Torrington makes them better, and for less!

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As a leading contract fabricator, TORRINGTON is equipped with the special machinery to produce in any quantity for quick delivery at low prices.

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Makers of
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7 come 11

THERE are seven stock resistors and eleven made-to-order resistor types in Ward Leonard's line of Vitrohm resistors to give you accurate, uniform, dependable current control.

This is the largest selection of stock resistors, and the most complete supply of resistor components ready for immediate assembly to your particular specifications, ever offered by any manufacturer.

Find out for yourself how Vitrohm resistors will best meet your requirements in current control. Write for our Catalog 15. Ward Leonard Electric Co., 51 South Street, Mt. Vernon, N. Y.

STRIPOHM RESISTOR for tight quarters in electronic equipment

Save money with Vitrohm resistors. Both stock and made-to-order resistors can be supplied promptly to meet your every resistor need.

3.5

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RHEOSTATS • RELAYS • MOTOR CONTROLS • CHROMASTER

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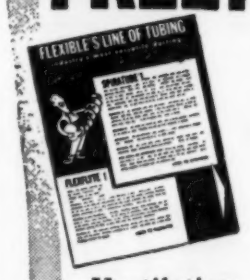

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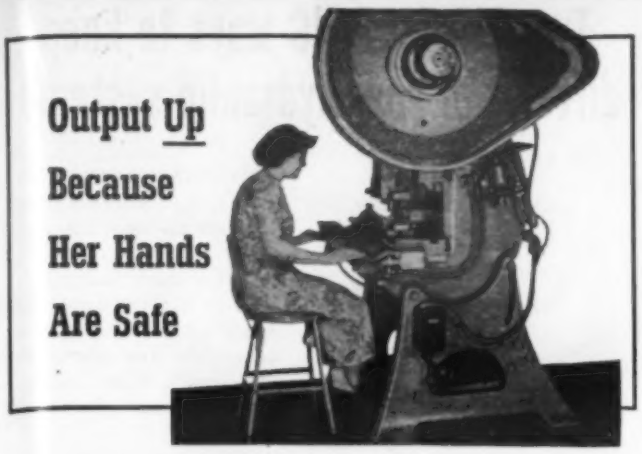

Operator confidence soars—and so does production—with the Schrader Press Control. Definitely a two-hand device, it is designed so that the hands that feed the die must also operate the press. Neither valve can be tied down to get one-hand operation.

This *increased safety* of Schrader's Control lets operators build a worry-free rhythm that puts new speed in your presses in just a short time.

Get details on complete Schrader Two-Hand Press Controls—and other Schrader hand and foot-operated controls. Write for Pneumatic Control Folder A-278 today.

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Division of Scovill Manufacturing Company, Incorporated

459 Vanderbilt Ave., Dept. E-40, Brooklyn 38, N. Y.

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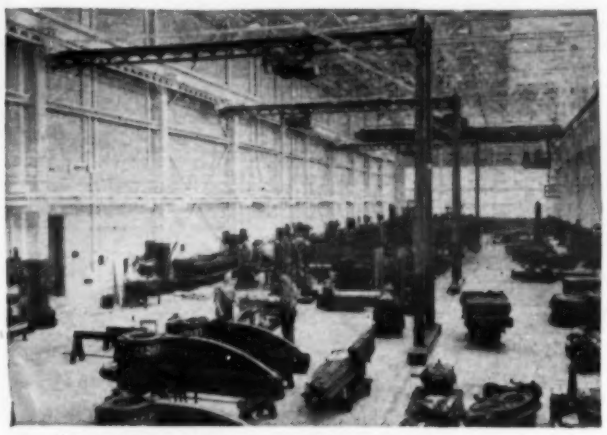

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Little Cranes that Speed Production

Skilled workers often wait five or ten minutes and more for crane service. By providing a sufficient number of gantry cranes, much or all of this lost time can be eliminated and production aided. Gantry cranes are inexpensive; several can usually be purchased for less than the price of an additional large overhead crane and far better handling service provided.

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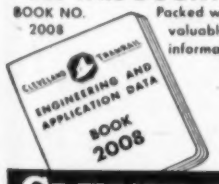

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6613 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

For more details circle NED-866 D3 on enclosed inquiry slip

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This book shows how to

Cut Roof Repair and Re-roofing COSTS IN HALF!

Do First-Class Work with Unskilled Labor

90% of Leaking Roofs CAN be Saved

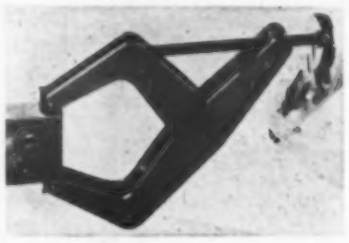
Save with Tropical's Maintenance and Re-roofing System. Free manual shows simple step-by-step method using unskilled labor to do first-class work. Shows how to add years of life to leaky roofs. No special equipment or training needed. No fire risks!

FREE BOOK GIVES MONEY-SAVING FACTS!
***Your business letterhead request* brings a FREE copy of "Saving Old Roofs"—write today!**

THE TROPICAL PAINT & OIL CO., SINCE 1883
1124-1248 W. 70th St. • Cleveland 2, Ohio

For more details circle NED-867 D3 on enclosed inquiry slip

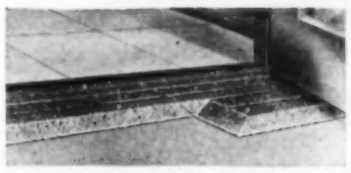
TWIST-FREE CLAMP
capacity range is 3 to 12 in.



Parallel action of cantilever jaws is feature of Saxton Kant-Twist clamp, which has a capacity range of from 3 to 12 in. Screw and head are fabricated from alloy steel and are supported at both ends. The ¾-10 Acme thread withstands abusive clamping operations. Clamp is tightened by a wrench applied to its 1-in. square head which also features right angle drilled hole for quick-spin adjustments. The torque-converting, spring-bearing trunnion eliminates distorting and twisting action and absorbs vibration encountered in milling, routing, shaping and riveting operations. Distributed by **Centinela Industrial Supply Co.,** 11934 Inglewood Ave., Hawthorne, Calif.

For more details circle NED-868 D3 on enclosed inquiry slip

INDUSTRIAL THRESHOLD
facilitate floor hinge installation



Designated type 115-SA, abrasive cast threshold is designed to permit easy installation with various types of floor hinges. Safety and wear resistance are afforded by aluminum oxide grits cast integrally into surface. Thresholds are offered in aluminum and iron, and also bronze and nickel when permitted. Made by **Wooster Products, Inc.,** Dept. I, Wooster, O.

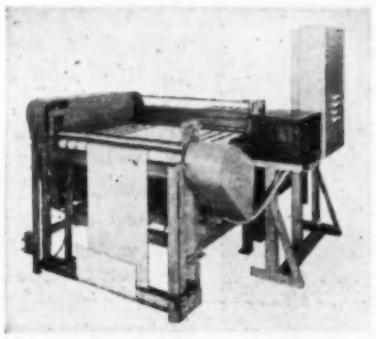
For more details circle NED-869 D3 on enclosed inquiry slip

GAS-FIRED UNIT HEATERS
deliver 70,000 to 230,000 Btu/hr

Line of gas-fired unit heaters made in seven sizes and ranging in outputs from 70,000 to 230,000 Btu per hour feature all welded, aluminized steel combustion chamber and heat exchanger. These withstand temperatures to 900° F without discoloration and up to 1600° F without scaling. Other features include built-in draft diverter, four-bladed aluminum propeller fan, adjustable louvers, gray enameled bonderized steel casing with rounded corners, 115-v 60 cycle single phase motor, interchangeable cast iron burners, automatic pilot safety switch and temperature limit control and shut-off valve in pipe connection ahead of controls. Made by **Young Radiator Co.,** 729 Marquette St., Racine, Wis.

For more details circle NED-870 D3 on enclosed inquiry slip

POWER SHEAR
can slit and cut to length wide variety of soft materials



Power for the Jacques power shear is supplied through a Warner electric clutch and brake. It can be used to trim, slit or cut to length paper, laminations of paper and foil, or paper and plastic, sponge rubber and fabricoid cloth.

When material is automatically fed in process, either for cutting or slitting, it is measured either mechanically or electronically to within a few thousandths of an inch and cutting head is actuated automatically. In an installation for semiautomatic cutting of material from a roll, material can be fed by the operator manually bringing feed rolls together. Rolls are actuated by chain drive from the main motor. After sufficient material has been fed through to gage length, cutting knife is actuated by an electric foot switch. Made by **Hobbs Mfg. Co.,** Dept. NED-1, 26 Salisbury St., Worcester 5, Mass.

For more details circle NED-871 D3 on enclosed inquiry slip

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New

SUPER SIREN for fire alarm or civil defense warning

The New Federal Thunderbolt electrically driven siren, using less than 10 H. P., is of radically new design and greater efficiency than has ever been offered. The flow and cutting of air which is a prime factor in sound production, in this siren is controlled to produce a directional beam of sound waves of unusual intensity and range. It was developed to cover large outdoor areas many times greater in extent than can be covered by conventional sirens of equal or greater H. P.

The loudest and most practical general alarm warning signal for large independent establishments, construction projects and municipalities. Write for Bulletin No. 97 on Air Raid Signals today.

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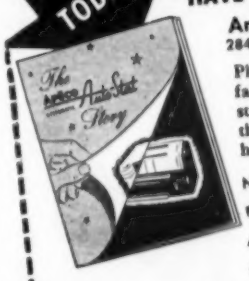

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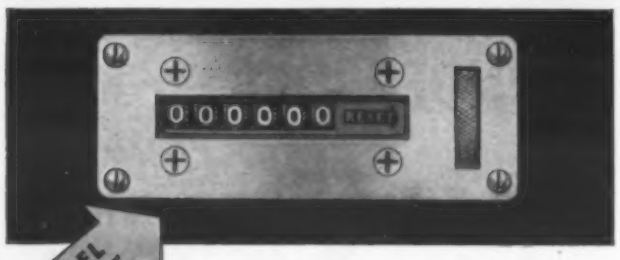

MODEL "Y" ELECTRIC PRODUCTIMETER

on the MACHINE or at CONTROL CENTER

The flexibility of the Model "Y" Electric Productimeter offers versatility of application to suit individual needs. Panel mounts grouped at control center give immediate production figures of many machines in different plant departments. Operates accurately over wide current fluctuations. Totally enclosed.

Hi-Speed, Compact, Accurate, Durable. Adaptable to panel or base mounting.

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PRODUCTIMETERS SINCE 1879 *Count Everything*

For more details circle NED-874 D3 on enclosed inquiry slip

Whether you make precision micrometers . . .

. . . or complex mechanical units, you can

Wrap Out Rust

-with

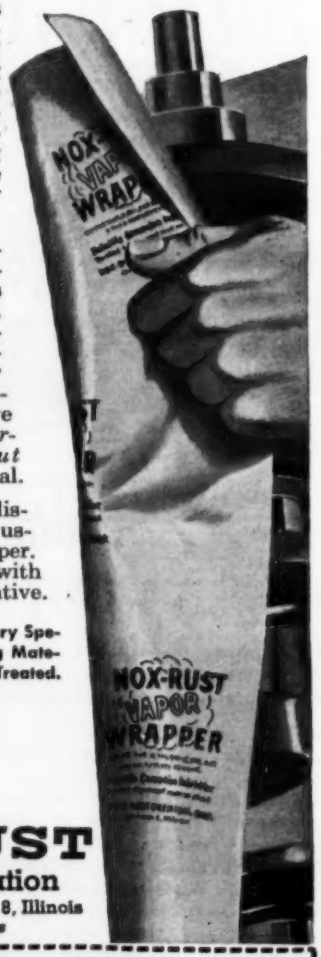
NOX-RUST Vapor-Wrapper

New *Chemically Active* Paper
Blocks Rust in One Simple Operation!

Vapor-Wrapper makes rust-proofing of metal products faster, easier, less costly! Easy to use as wrapping paper, this remarkable rust-preventive paper protects everything from instruments to printing presses . . . cuts costs while delivering products ready for use!

Vapor-Wrapper ends dipping with liquid rust preventives . . . eliminates cleaning and degreasing. The chemical *within* Vapor-Wrapper—an exclusive development of NOX-RUST laboratories—makes moisture-laden air non-corrosive . . . *without the need for an air-tight package . . . without deposits* forming on the metal.

Many companies have discovered the advantages of using NOX-RUST Vapor-Wrapper. Cut costs in *your* business with this new, *proven* rust preventive.



Vapor-Wrapper conforms to Military Specifications MIL-P-3420. Packaging Materials, Volatile Corrosion Inhibitor Treated.

NOX-RUST VAPOR WRAPPER

NOX-RUST Chemical Corporation
2433 S. Halsted Street, Chicago 8, Illinois
Offices in Principal Cities

NOX-RUST Chemical Corporation
2433 S. Halsted, Chicago 8, Illinois
Please send me your booklet on Vapor-Wrapper, the rust-preventive paper that *wraps out rust.*
Name.....Title.....
Firm Name.....
Address.....
City.....Zone.....State.....

For more details circle NED-875 D3 on enclosed inquiry slip

SOFT DRINK DISPENSER
carbonation equal to bottled drinks

Improvements incorporated in the Magniflo three-flavor soft drink dispenser for plant or cafeteria use include the Duotonic Tap which produces carbonation equal to that of bottled drinks and a refrigeration system that cools reserve water instantaneously. No larger than earlier made Cole-Spa dispenser, new unit has double its capacity. The new M-12 hermetic unit is smaller in size, yet has 71 per cent greater capacity than older models. Dispenser can also be located in places not suitable to older equipment. Made by **Cole Products Corp.,** Dept. D, 39 S. LaSalle St., Chicago 3, Ill.

For more details circle NED-876 D3 on enclosed inquiry slip

CONTROL RHEOSTATS
in 330, 450 and 1000-w sizes feature low operating torque

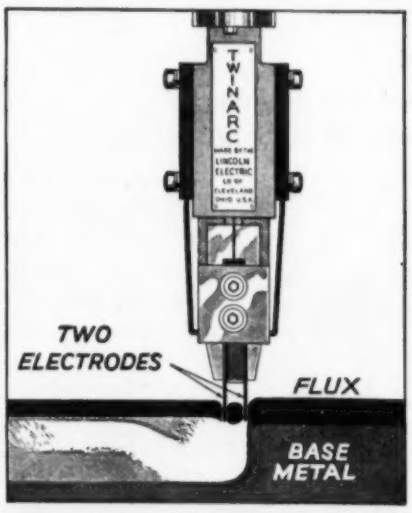
Developed for industrial control applications, Vitrohm pressed steel rheostats feature smooth operation, low operating torque and more control steps than previous designs. Balanced contact arm is keyed directly to drive shaft. Self-lubricating bushing and graphitized movable contact shoe are used. Solid rectangular stationary contacts, reflexed self-cleaning collector ring, and Vitrohm enamel sealed resistance element, stationary contacts and collector rings are features.

Standard and multistep models are available in 6, 8 and 13-in. diameters with maximum summation ratings of 330, 450 and 1000 w respectively. Control steps per plate range from 41 to 161. Both types are available in wide range of resistance values and current tapers. Accessories and optional features are offered for manual or motor-driven operation. Made by **Ward Leonard Electric Co.,** 51 South St., Mt. Vernon, N. Y.

For more details circle NED-877 D3 on enclosed inquiry slip

SUBMERGED ARC WELDING
two small electrodes increase penetration and welding speed

Speed of automatic hidden arc or submerged arc welding can be increased from 50 per cent up by a development called Twinarc welding, which employs two small electrodes in place of a single larger electrode. Two electrodes are fed simultaneously through a single head and a single jaw to deposit metal in the weld crater. Higher currents possible increase the rate of metal deposition, amount of penetration and speed at which welding is performed.



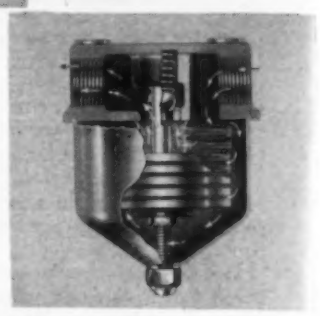
Process is recommended for use on butt or fillet welds in ¼-in. or thicker plate where the application is normal for automatic hidden or submerged arc welding. Special electrode jaw, wire feed rolls and wire guides adapt any standard Lincoln weld head for using two electrodes. Standard single head controls are used along with standard direct current welding generators. Currents up to 1500 amp can be used. Head feeds 5/64, 3/32 and 1/8-in. wire. Made by **Lincoln Electric Co.,** Dept. H, 22801 St. Clair Ave., Cleveland 17, O.

For more details circle NED-878 D3 on enclosed inquiry slip

Two AIR-MAZING ways to keep dirt out of your hydraulic systems

1 AIR-MAZE BREATHER FILTERS for hydraulic system vents keep out airborne dust and dirt. Oil-wetted wire baffles trap the dust, also act as efficient backfire flame and spark arrester. All metal, cleanable, vibration-proof filter media. Wide range of types and sizes.

2 AIR-MAZE LIQUID FILTERS are permanent, all-metal, cleanable. Many times more effective filtering area than in conventional cylindrical filter cartridges. Special screen media available in various mesh sizes. Capacities: 1.7 gpm to 720 gpm.



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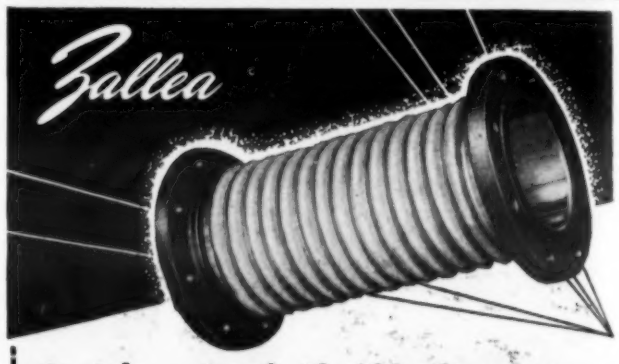

Stainless Steel Flexible Connectors

. . . are designed to fill the need for an inexpensive low pressure joint capable of absorbing great axial and lateral movement. Like all other Zallea Expansion Joints, these flexible connectors are hydraulically formed with uniform wall thickness throughout. This is one of the features which assures you of long service life.

Available in diameters from 3" to 72", Zallea Flexible Connectors are ideal for applications on Diesel engine exhausts, high temperature air, gas and catalyst lines, etc.

Write today for Bulletin 351 for complete information on all types Zallea Expansion Joints. Zallea Brothers, 818 Locust Street, Wilmington 99, Delaware.

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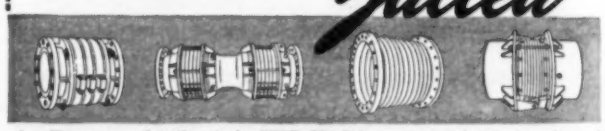

For more details circle NED-880 D3 on enclosed inquiry slip

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Tuck 'em in snug . . . stretch both storage capacity and your operating budget . . . by stacking extra-large loads extra tiers higher. That's just one of many ways that widely adaptable Towmotor takes the hobbles off your materials handling routines for greater efficiency. Any one alone totals up savings that pay for Towmotor many times over. Methods which make these savings a reality are described in a new book titled "Man-Hour Thieves." Write for your copy, and name of your nearest Towmotor Representative, to: Towmotor Corporation, Div. 2504, 1226 E. 152nd Street, Cleveland 10, Ohio.

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FORK LIFT TRUCKS and TRACTORS

TOWMOTOR ENGINEERED FOR QUALITY PERFORMANCE

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German made by one of Europe's leading specialists in precision tools. Measures inside-outside & depth in .001" to 6" in 1000ths and 1/10mm to 150mm in 10ths. 9.75
MICROMETERS – 0" to 1" in 1,000ths. Has lock-nut & ratchet ...ONLY – . . . 9.75

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Handy stand magnifier with universal adjustments. Overall height: 6". Has powerful, clear magnifying lens. 1.49

BENDIX HYDRAULIC PUMP & MOTOR
Has 3-1/2 GPM capacity at 600 PSI. Motor is 1½ HP, 24V, D.C. Will operate on either 12 or 32V, DC current. Has built-in relief valve adj. to 1500 PSI. This unit ideal for hyd. lifts, portable loaders, etc. 19.50

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A time saver for precision checking. Magnetic base fits curved or flat surface. Has 45-50 lb. pull. Stainless steel 6½" rod mounted in ball socket permits universal settings . . 3.95
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Operating pressure 2000 PSI. Cap., 1.5 cu. in per complete cycle . . . 12.75

GEAR HEAD MOTORS
Heavy duty, G.E. Gear Head motor. 2 HP, 24V. DC, 125 amp., reversible motor drives a reduction gear unit giving 36 to 1 ratio at take-off. Also will operate on 6 or 12 volts.
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36 to 1 G.E. (306 shaft RPM)
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Hundreds of uses for any mechanical device needing controlled 2 way action. Opens, closes, raises or lowers doors – windows – gates – valves.
CTU-2 – Foote Linear Actuator – 24 volt, DC, 8500 RPM, 1/6 HP – series wound motor. 4½" stroke in 13½ sec. Compression and tension loads up to 750 lbs. Adjustable micro switch for limits of travel. Overall lngth., retracted 11" 7.95
We also carry many more sizes and types of Actuators. Write today for information.

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Gives 20,000 lb. thrust (push or pull) using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on low pressure air systems. 4" bore; 18" stroke; 30½" length. Ideal for roll form – shop machinery. 29.75

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Double action. Bore is 1" – Shaft ½". Has stroke of 2½" to 4". Stroke can be adjusted with internal sleeve stops. Overall length is 8½". Will take 1500 lbs. continuous duty. 3000 lbs. intermittent. Will lift or push up to 1100 lbs. 5.75
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INGERSOLL-RAND *introduces* ANOTHER BIG FIRST

the NEW *overspeed* SAFETY COUPLING

The Overspeed Safety Coupling supplements, and is completely independent of, the regular factory-set weight type governor used in Ingersoll-Rand Air Tools.

This built-in unit, which operates in case of failure of the regular governor, eliminates the possibility of dangerous overspeed operation. If, for any reason, the motor speed exceeds the safe wheel speed, the NEW Overspeed Safety Coupling automatically uncouples the arbor and the wheel from the motor, making it impossible to operate the Grinder until the cause of overspeeding has been corrected.

GRINDER OPERATORS *Also Asked for* THESE *Extra* FEATURES
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- 20% More Power
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- Rubber-Faced Valve
- Optional Handle

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665-8

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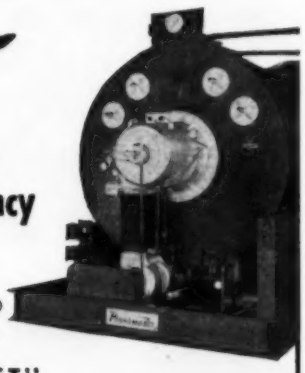
11 BROADWAY, NEW YORK 4, N. Y.

For more details circle NED-883 D3 on enclosed inquiry slip

Now-

83% guaranteed minimum efficiency with No. 6 oil



ANOTHER *Powermaster*® "FIRST"

Compare ASME tests on *Powermaster* with those of any other boiler. You'll see why the automatic *Powermaster* with VORIFLOW combustion is your best buy in packaged boilers. *Powermaster* efficiency actually *increases* at less than full load (which is normal field operation). Start cutting your steam costs today by getting full information on the installation, operating, and maintenance economics of *Powermaster* —15 to 500 HP units for steam generation to 250 psi, and hot water to 30 psi. ASME Code construction. Approved by Underwriters' Laboratories.

Write Now to:

ORR & SEMBOWER, INC.
930 Morgantown Road, Reading, Pa.

BUILDERS OF COST-SAVING BOILERS SINCE 1885

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ADJUSTABLE SPEED DRIVE gives vertical turret mill infinite table chuck speeds up to 212 rpm

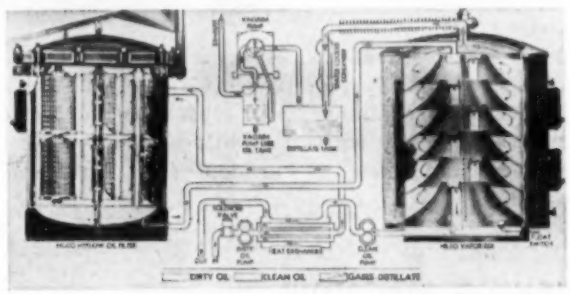
Unlimited table chuck speeds up to 212 rpm are provided by the adjustable speed drive for Rogers Perfect 36 vertical turret mills. Power unit requires comparatively small floor space and governs motor speed, thereby eliminating the eight-speed transmission, clutch, brake and lever controls on the standard machine. Independent speed control box can be located where convenient for the operator.

Control box, with rheostat control, has start, stop and jog pushbuttons, sets and changes motor speeds and provides an infinitely adjustable ratio over range of 166 to 1. Speeds can be changed while the machine is in operation. Stop button controls dynamic braking for quick stopping. Mills are equipped with adjustable five-position main vertical turret for tool settings including boring, drilling, reaming, turning and thread cutting. Made by **Rogers Machine Works, Inc.**, 1400 Seneca St., Buffalo 10, N. Y.

For more details circle NED-885 D3 on enclosed inquiry slip

OIL RECLAIMER for insulating and lubricating oils available in capacities to 500 gph

Continuous removal of contaminants which impair operating efficiency is function of Hilco Hyflow oil reclaimer. It purifies and maintains transformer in-



sulating oils, vacuum pump lubricating and sealing oils, lubricating oils used in diesel and gasoline engines, and many other types of industrial oils. Unit removes atmospheric dust, moisture, fuel dilution, sand, scale, rust, metal chips, carbon, soot and acids.

Schematic diagram above shows principle of operation. Units are available in capacities up to 500 gph, filters only for combination with vaporizers or the vaporizers separately. They are generally made to order and require floor space fom 10 to 100 sq ft. Made by **Hilliard Corp.**, 40 W. Fourth St., Elmira, N. Y.

For more details circle NED-886 D3 on enclosed inquiry slip

BETTCHER MANUFACTURING CORPORATION . . .

says PHILLIPS degreasing
★ speeds up production
★ cuts overall production costs
★ gives more efficient cleaning

Phillips Model 84 degreaser gives fast, efficient cleaning in the Bettcher plant

PHILLIPS VAPOR DEGREASERS

- Higher operating temperature, greater capacity.
- No rinse, blast or drying operations.
- Power consumption only 70% in full production.
- Sizes, types for every need.
- Accurate, economical, safe solvent control.

Bettcher Manufacturing Corporation of Cleveland, Ohio has found that Phillips degreasing is vitally important in keeping costs low. Two Phillips batch type degreasers plus Phillsolv (stabilized and inhibited) are used to give fast, efficient cleaning of conversion heater parts. As a result, cleaning costs have been reduced 50% by this modern Phillips method. Parts are cleaner too, making possible further savings in finishing.

This is how the Phillips system helps get more profitable production. No matter what your own cleaning needs are, there is a Phillips unit to fit. Check with Phillips today for metal cleaning that cuts costs and improves cleaning at the same time.

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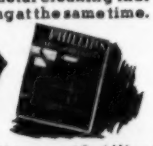

Complete information kit. Details on sizes, styles, installation. Illustrated bulletin and vapor degreasing handbook.

Phillips MANUFACTURING COMPANY
3463 Touhy Avenue • Chicago 45, Illinois
Engineered Metal Cleaning Equipment

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WORKS LIKE DYNAMITE!
but a safe cleaner for aluminum

the Original GUNK HYDRO-SEAL world's most powerful solvent for cleaning carbonaceous tars, carbon, paint from carburetors, pneumatic tools, internal combustion engine parts, diesel injector nozzles, oil burner nozzles, etc.

a synergistic Di-Phase solvent
27 times faster cleaning than lye

free of causticity and toxicity — safe to handle

self-emulsifying and self-scouring

extreme solvency — terrific penetration

brightens aluminum without etching, loss of weight or dimension

available in 5—30—55 gal. sz. ready to use Kits and 1 gal Rejuvenator size

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25% SAVED!

Packaging costs were reduced by as much as one-fourth when the Fafnir Bearing Co. adopted the Stanley Steel Strapping System.

In almost every type of plant—with almost every type of product—substantial savings are being made in packaging and handling by this cost-cutting system. Put it to work for *you*. Call in the Stanley Packaging and Shipping Engineer. He'll install the Stanley Steel Strapping System on a 30-day trial. There's no obligation. Just mail the coupon below. The Stanley Works, Steel Strapping Division, New Britain, Conn. Branch Offices or Representatives in 32 principal cities.

STANLEY STEEL STRAPPING SYSTEM*
Reg. U.S. Pat. Off.

*A MAN thoroughly experienced in steel strapping applications—the Stanley Packaging and Shipping Engineer.

A METHOD adaptable to any requirement — the Stanley Steel Strapping System,

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

5th NATIONAL MATERIALS HANDLING EXPOSITION MAY 18-22, 1953 PHILADELPHIA

See us at Booth 1009

The Stanley Works, Steel Strapping Division
209 Lake St., New Britain, Conn.

☐ Yes — the 30-day trial interests me. Have the Stanley Packaging and Shipping Engineer call.

☐ Send me complete information about the Stanley Steel Strapping System.

(Please write name and address in margin of page)

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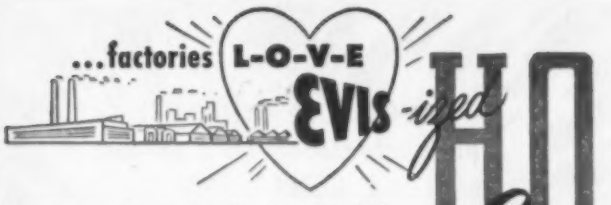


. . . because it puts an end to scale deposits in Piping Systems, Boilers (to 175# wp), Condensers, Heat Exchangers and other plant equipment without the use of costly additives.

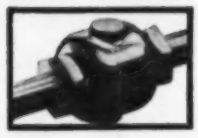
This phenomenal new water treatment method applies a continuing catalytic effect which changes the physical behavior of raw water in several valuable ways. *EVIS IS NOT A SOFTENER*

FLOW LINE TYPE UNITS HELP ELIMINATE SCALE FROM DEEP WELL PUMPS *(Screwed Only) 2", 2½", 3" & 4" or larger on order.*

SOLD BY . . . *Plumbing Supply, Air Conditioning-Refrigeration and Industrial Jobbers*

Sold on 90-DAY MONEY BACK GUARANTEE

SIZES (iron or bronze)
SCREWED • ½" *thru* 2"
FLANGED • 2" *thru* 12"



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PHILADELPHIA EVIS-MIDEAST CO. *4 E. Richmond St., NE 4-8703*
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EXCLUSIVE MARINE DIST. MORAN-EVIS CO., SAN FRANCISCO *420 Market St., DO 2-4565*

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metal, plastic, wood, rubber or leather products, there's a specific Jewel Brand Abrasive Belt made to help you do the job better . . . faster . . . and at a lower cost. Let an experienced Jewel Brand Abrasive Engineer help you select the *right* one. Write today for complete details. Abrasive Products, Inc., 525 Pearl St., South Braintree 85, Mass.

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GET BETTER PRODUCTION HEATING

with WATLOW HOT PLATES

For many heating and pre-heating operations requiring wide range of accurately controlled temperatures . . . Surface plate is highly polished steel—no plating to flake off. Leveling feet. Rectangular shapes in almost any size to order. Controls for temperatures up to 550° F, 3—heat snap switches for 550° to 750°.

WATLOW Since 1922—Designers and Manufacturers of Electric Heating Units
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SAINT LOUIS 14, MO.

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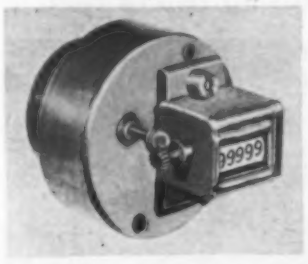
ELAPSED-TIME INDICATORS
for industrial or laboratory use



Determining equipment operating time for guarantee purposes and indicating hours of operation to facilitate periodic lubrication and maintenance are among uses of series ET-1 running-time indicator. Model ET-1A counts to 99,999 hours by the hour, while model ET-1B counts to 9999.9 by tenths of hours. Utilizing a Bristol Circle B motor, unit features small size, 2-in. diameter by 2⅛-in. depth, which adapts it for panel or unit mounting. Units operate on 115 v 60 cycles, but can be altered for use with other voltages. Made by **Vocaline Co. of America,** Bristol Motor Div., 86 Coulter St., Old Saybrook, Conn.

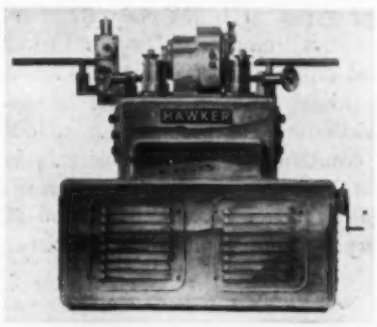
▲ For more details circle **NED-893 D3** on enclosed inquiry slip ▲

INSPECTION LIGHT
portable unit is ultraviolet type

Directional beam of long wave 3660-angstrom unit ultraviolet light can be thrown up to 30 ft by the Mineralight inspection lamp. It is an intense 100-w black light lamp operating on 110-v ac that clamps to its nontip base which contains the transformer. Radiation is harmless to eyes or skin. Use can be for detecting oil leaks in machinery or on fabrics, or combined with invisible fluorescent inks, dyes or powders for a wide variety of inspection operations. Many substances, such as oil, fluoresce naturally without additives. Made by **Ultra-Violet Products, Inc.,** 143 Pasadena Ave., South Pasadena, Calif.

▲ For more details circle **NED-894 D3** on enclosed inquiry slip ▲

TURNING MACHINE
for wood and plastics



Variable feed and cutterhead speed control enable selection of best speed combinations for type of stock and surface desired on the model 1000 wood and plastics turning machine. Self-centering and equalizing stock guide eliminates chatter and vibration, and a blower type shaving hood exhausts chips from the hood. A redesigned drive system eliminates clutch, gears and shafts and reduces lubrication and maintenance costs. Made by **Hawker Mfg. Co.,** 1420 Keowee St., Dayton 4, O.

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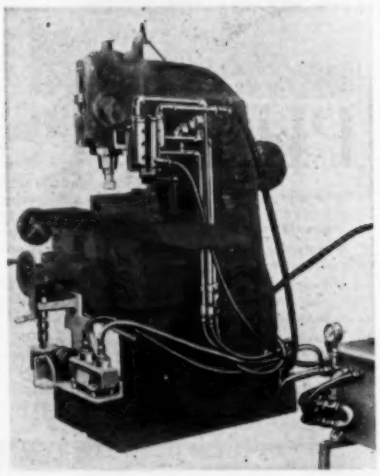
HYDRAULIC COPYING ATTACHMENT
installs on normal milling machine



This Bondycop hydraulic copying attachment which installs easily on standard milling machines allows machining of turbine blades, molded parts, plastic shapes and similar parts by unskilled labor. It makes certain of the uniform quality of machined parts, avoids defective pieces, insures accuracy and is capable of large and small runs. Attachment is obtainable in several sizes, and is distributed by **Morey Machinery Co.,** Dept. NED, 410 Broome St., New York 13, N. Y.

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now an improved E-6010

the new MUREX® type R

Murex now gives you the first real improvement in Type E-6010 electrodes in many years.

A completely redesigned electrode, the new Murex Type R welds with less spatter—digs deep without undercutting—does not spear—takes higher currents with no sacrifice in performance—has outstandingly uniform arc action.

Physical properties too, are excellent—more than you'll ever need in E-6010 applications.

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CHEMICALS and ANODES for Electrotinning
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Murex Electrodes • Arc Welders • Accessories

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Wing arm head for cleaning scale, coke or other deposits from curved tubes.

It's fast and easy to clean any tube, straight or curved, with an AIRETOOL tube cleaner. AIRETOOL cleaner heads remove even the hardest deposits, restore tubes to their original usefulness. Wide assortment of cutter heads, drill heads, brush heads available. Powered by high speed powerful motors, air, steam or water driven. Slip-fit constructed for easy maintenance. Write today for full details: The Airetool Manufacturing Company, 308 South Center Street, Springfield, Ohio.

There's an AIRETOOL Tube Cleaner and Tube Expander For Every Type of Tubular Construction.

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SPRINGFIELD, OHIO • Branch Offices: New York • Chicago • Tulsa
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NEW! Inexpensive Purge Rotameters*

INDICATE and PERMIT MANUAL CONTROL OF FLUID FLOW IN SMALL QUANTITIES

(*featuring a back flow check valve and flow control valve)

● This new SK Purge Rotameter is designed for use where small, low-cost flow meters are needed to indicate and manually control small flows of fluids with good reproducibility but moderate actual measuring accuracy.

Rate of flow of the fluid through the meter is indicated by the position of a ball float moving in the tapered glass meter tube. Flow rate is read in reference to the center of the ball float on a scale mounted alongside the meter body.

The instrument has several outstanding features—the valves mentioned above, rigid one-piece body, others. Complete details are available. WRITE FOR BULLETIN 18-RB, SUPPLEMENT PR.

SCHUTTE AND KOERTING CO.
28 State Road, Cornwells Heights, Bucks County, Pa.

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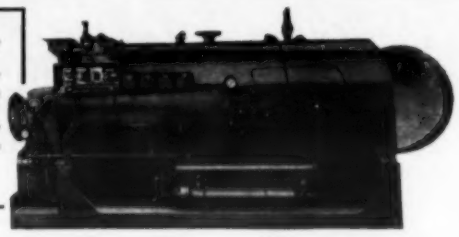
75 hp boiler shown here. Sizes from 20 to 500 hp, high or low pressure.



It takes only 30 minutes . . . to open a CONTINENTAL Boiler . . . for cleaning or inspection

With a CONTINENTAL you'll hold boiler down-time down . . . because the clean-out-and-inspection-doors at both ends are hinged and can be handled easily by one man.

Also with a CONTINENTAL you get advanced two pass design. This design eliminates baffles that may break during operation and destroy boiler efficiency. Furthermore, the use of two pass design plus forced draft results in uniform distribution of heat through all tubes. This insures long life because all tubes do equal work. And with the Continental, 80% efficiency is guaranteed.

Find out how low Continental is in initial and operating cost: Write for Catalog 102.

CONTINENTAL is sold, installed and serviced by competent distributors throughout the U.S.

BOILER ENGINEERING AND SUPPLY COMPANY, INC.
Manavon Street • Phoenixville, Pa.
40 Years of Boiler Experience

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The Day the Cake Fell!

Just suppose all the nuts, bolts and screws were suddenly removed from a sparkling new range. A great deal more than a cake would fall.

Yes, fasteners *are important*—and worth all the time and care you take in selecting those that are "just right" for your product. Lamson & Sessions is currently supplying most of the appliance manufacturers with bolts, nuts and screws—each type engineered to meet individual requirements.

Regardless of the product you manufacture; it will pay to take a critical look at the fasteners you are now using. Can you save money by replacing a "special" with a "standard"? Or will the use of a "special" simplify production, thereby, saving time and perhaps materials?

Check with Lamson & Sessions—one of the few manufacturers offering a *complete line* of fasteners teamed with expert engineering service.

The LAMSON & SESSIONS Co.
1971 West 85th St. • Cleveland 2, Ohio
CLEVELAND AND KENT, OHIO • BIRMINGHAM • CHICAGO

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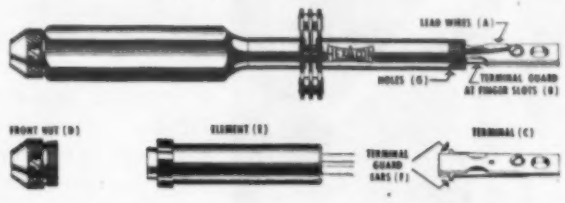
SOLDERING IRON ELEMENT designed for easy changing

Quick-change terminal on Hexacon soldering irons can be removed in a few seconds, permitting heating elements to be replaced in a short time.. Terminal is



removed by depressing the terminal guard at the finger slots. A steel spring guard reinforces the terminal to prevent breakage, and a brass sheath on the elements speeds element changing and protects resistance wire and mica. Quick-change feature is available on all regular plug tip, hatchet, featherweight and super-powered soldering irons. Made by **Hexacon Electric Co.,** 145 W. Clay Ave., Roselle Park, N. J.

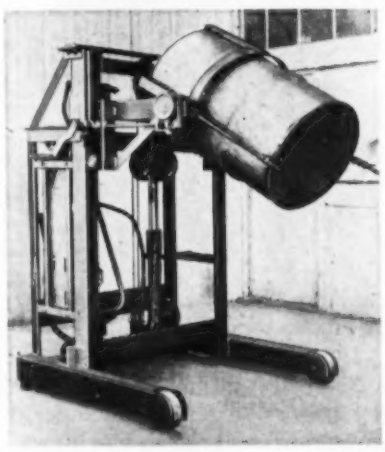
▲ For more details circle NED-902 D3 on enclosed inquiry slip ▲

BRAZING FLUX for high temperature applications

Film strength of Kwikflux No. 94 flux for high temperature brazing and hard soldering of ferrous and nonferrous metals eliminates island formation, prevents oxidation and scale, and protects and cleans metal surfaces. It is nonspattering and has deep penetration power. Flux can be used with all standard silver, brass, bronze and other hard solders and all types of heating applications. Objectional fumes are fixed and neutral. Made by **Special Chemicals Corp.,** Dept. NE, 30 Irving Pl., New York 3, N. Y.

▲ For more details circle NED-903 D3 on enclosed inquiry slip ▲

BARREL HANDLER is portable elevating type unit

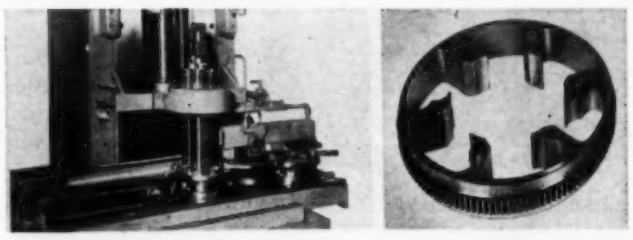


Safe barrel handling and dumping is possible with this Weld-Bilt portable elevator equipped with tipping load bars. Barrel or drum is placed in the drum cradle and secured with the threaded locking bars on the end and a hooked chain around the girth. Tipping is accomplished with hand crank and worm gear mechanism. Jack-up type steering control prevents movement as barrel is emptied. Machine shown has electric-hydraulic power, but hand or fully electric models are also available. Made by **West Bend Equipment Corp.,** 220 S. Walter St., West Bend, Wis.

▲ For more details circle NED-904 D3 on enclosed inquiry slip ▲

INTRICATE INTERNAL BROACHING complicated contour work is performed on standard machines

Standard broaching machines can be used to broach such intricate internal contours as illustrated. Six identical contours between the internal lobes on the



part shown here are broached in two passes, three alternate contours in the first pass and the remaining three in the second pass. A two-station fixture facilitates locating from the offset holes in the part. A built-up type broach with inserted broach sections is used.

Machine is a standard 15-ton, 66-in. stroke Colonial pull-down single ram broaching machine. Dowels in the fixture support the lobes during broaching. Side shuttling fixture has a central opening through which the broach is returned after each pass. Made by **Colonial Broach Co.,** P. O. Box 37, Harper Station, Detroit 13, Mich.

▲ For more details circle NED-905 D3 on enclosed inquiry slip ▲

If you have a labeling problem ordinary labels can't solve...use **AVERY** Kum Kleen self-adhesive **LABELS**

...the tough ones are our specialty

...where other types of labels are found "wanting"...or when you need to substitute an attractive pressure-sensitive label for a costly nameplate... Avery Kum-Kleen labels are the *best* solution to your problem!

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...where you want *faster* labeling... improved appearance...labels that won't pop, curl or peel...or those the housewife can remove without soaking or scraping...there's no substitute for an Avery Kum-Kleen label!

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Patented Avery dispensers...manual or electric... feed die-cut *pressure-sensitive* labels off roller tape, ready to be LAID ON any clean, smooth surface. No moistening...no sticky fingers.
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Originators of Pressure-Sensitive Labels

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Think of it—in only 27" is packed the complete power unit for the "Walkie" type lift truck. *Other models are only 23¾" . . . That's space efficiency . . . plus!

If you have a material handling problem that requires minimum "operation area", ask about the "Walkie" MOTO-TRUC. Its application in close areas is making history every day . . . write for complete information on all the advantages of MOTO-TRUC.

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PALLET . . . PLATFORM . . . HI-LIFT TRUCKS
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PROBLEM:

Obtain higher electrical conductivity without increasing the cross-sectional area of spring blades

SOLUTION:

General Plate provided the solution with **BRONCO** a composite metal

Increased conductivity of spring blades in a time switch was recently required by a manufacturer of demand meters. Operating requisites were high conductivity, excellent spring properties and small cross-sectional area.

General Plate provided the solution with BRONCO, phosphor bronze double-clad on copper. The phosphor bronze makes an excellent spring member; the copper gives increased conductivity. BRONCO 25/50/25 provides an electrical conductivity of 55% compared with solid copper.

BRONCO permits miniaturization. It permits you to make smaller units because you can reduce spring size without sacrificing conductivity.

No matter what your problem, you can profit by using General Plate Composite Metals. Write for Catalog PR700 today.

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
84 FOREST STREET, ATTLEBORO, MASS.

For more details circle **NED-908 D3** on enclosed inquiry slip

Added Evidence that

Everyone Can Count on VEEDER-ROOT

REPORTER AT LARGE . . . that's what you might call this new Veeder-Root Reset Magnetic Counter . . . adaptable to remote counting from machines or processes to central boards or instrument-clusters, wherever you want to put them. NOW . . . what can your imagination do with these few facts? For the *full facts*, write:

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONN.

For more details circle **NED-909 D3** on enclosed inquiry slip

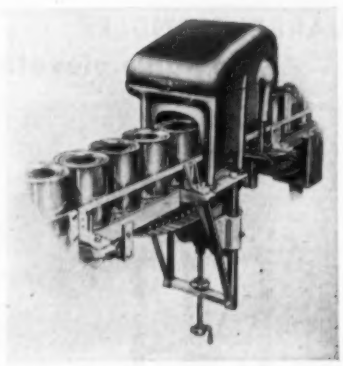
HYDRAULIC FLOOR CRANES
three improved models facilitate materials handling operations

Three improved models have been added to the Ruger line of hydraulic-power floor cranes. Illustrated model HP-2A crane has capacity of 2 tons and features adjustable legs which can be set at any of three positions to straddle heavy loads or objects where there is no floor clearance. It has 64-in. boom which raises from 43 in. to 109 in. above floor. Swivel 6-in. casters have position lock for each position of straddle legs.

Also available is model HP2WH model with capacity of 2 tons. This high mast unit has extension boom which gives 12½-ft highest position and 3 1/6-ft lowest position. Wide base affords stability. Larger cylinder is employed in 1-ton capacity model HP-18 to reduce work effort required of operator by 30 per cent less than in previous machine. All cranes have double-acting variable speed and power hand pump. By turning the handle right or left, the fulcrum is raised or lowered to regulate pumping effort and permit lifting of load by one man. Made by **Ruger Equipment, Inc.**, 619 W. Fourth St., Uhrichsville, O.

For more details circle **NED-910 D3** on enclosed inquiry slip

CONTAINER MARKING DEVICE
operated by movement of containers

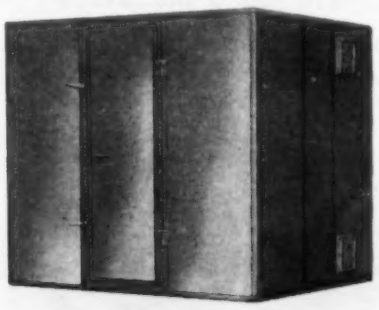


Filled metal or glass containers can be marked by the Bruceway marker which is operated by movement of containers themselves along conveyor line. Moving cans rotate pair of starwheels which in turn actuate stamping wheel. Speed of container movement is not restricted. Model No. 400 handles containers from 2 to 8½ in. high, and with 1¾ to 3¾-in. diameters, while model 600 handles units from 2¼ to 12 in. high and with 3 1/16 to 7½-in. diameter. Both are adjustable to conveyor widths. Made by **Barry-Wehmiller Machinery Co.**, Dept. 213, 4660 W. Florissant Ave., St. Louis 15, Mo.

For more details circle **NED-911 D3** on enclosed inquiry slip

R-F SHIELDING ASSEMBLY
offered in eight sizes, rooms can be air conditioned if necessary

Developed for suppression of radio interference in testing and other operations, line of prefabricated shielding enclosures consists of solid copper sheets which withstand exposure to severe weather conditions and afford maximum durability. Attenuation characteristics of this type of enclosure, with its single shielding layer, are reported to be as good as those of conventional cell type rooms made of copper screening.



The RFI Solid enclosure consists essentially of heavy copper sheet panels joined to rigid copper-plated channels and bolted at all seams. At joints, r-f leakage is minimized through use of tensioners. Rooms can be assembled and disassembled readily by inexperienced personnel either indoors or out, using standard tools. Enclosures are available in eight floor sizes ranging from 6 x 8 ft to 15 x 10 ft. Each unit has optional air conditioning equipment and provision to accommodate any services such as mechanical or electrical power, water, gas and air. Made by **RFI Shielded Enclosures, Inc.**, 3634 N. Lawrence St., Philadelphia 40, Pa.

For more details circle **NED-912 D3** on enclosed inquiry slip

INDUSTRIAL LIFTS • HOSE REELS • AIR COMPRESSORS

For more details circle **NED-913 D3** on enclosed inquiry slip

ANNOUNCING A NEW Gerrard Tying Machine . . .

FULLY AUTOMATIC B.S.M. TWINE SEALING MACHINE

The Gerrard B.S.M. Twine Sealer is completely automatic, makes a 1-cycle wrap, and secures the twine with a metal seal so firmly that the twine will break before the seal will slip. Bundles are limited to a 14" width and a 9" height.

● Here's a new, completely automatic tying machine that may fill a need in your plant . . . the Gerrard B.S.M. Twine Sealing Machine. Just place the bundle in the tying area, step on the pedal, and in three seconds, the twine is wrapped around the bundle, drawn to a preset tension, securely fastened with a *metal seal*, and cut. The bundle is firmly gripped and the tie will remain neat, strong and tight until the twine is cut. Several ties can be put around a bundle as quickly as it can be moved into position.

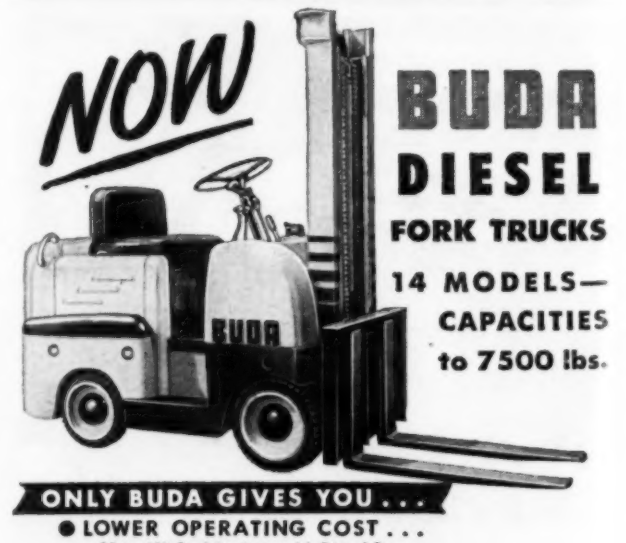
Look around your mailing or shipping department. There may be several spots where a Gerrard B.S.M. Twine Sealing Machine can save you time and money, and do a better tying job at the same time.

Send for folder describing the Gerrard Twine Sealing Machine. It's Free.
Also phone, write or wire for further information about the Gerrard Method of Twine Sealing or of Steel Strapping. A Gerrard engineer will gladly call, without obligation, to discuss your packaging and bundling requirements.

Gerrard Steel Strapping Division, United States Steel Corporation
4717 South Richmond St., Chicago 32, Ill.

USS **GERRARD STEEL STRAPPING**
UNITED STATES STEEL

For more details circle **NED-914 D3** on enclosed inquiry slip



ONLY BUDA GIVES YOU . . .
- **LOWER OPERATING COST . . .** 50 to 60% Fuel Savings with Diesel Power
- **LESS MAINTENANCE**
- **GREATER SAFETY**—Non-toxic, non-contaminating exhaust
- **LONGER OPERATION**—Between Overhauls

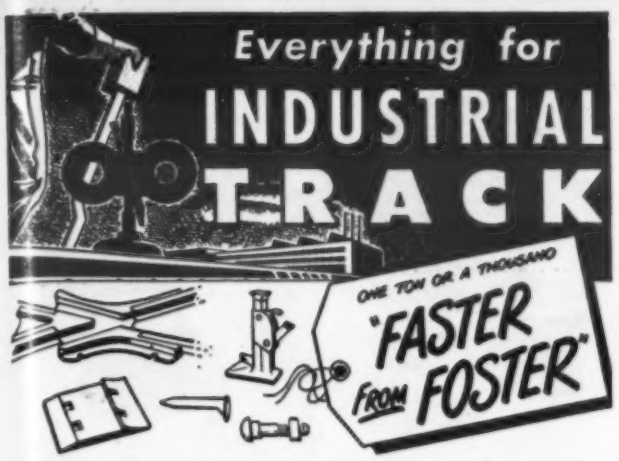
Ask your nearby Buda Material Handling Distributor about the new Buda "FT" Series Diesel or gasoline powered Fork Trucks today. Write for new, colorful Bulletin 1570. It's FREE—there's no obligation. The Buda Company, Harvey, Illinois.

The Line with all 3 for Diversified Handling

BUDA PLATFORM TRUCKS TOWING TRACTORS FORK LIFT TRUCKS

Manufacturers of Material Handling Equipment, Lifting Jacks, Maintenance of Way Products, Earth Drills and Diesel and Gasoline Engines BH-37A

For more details circle **NED-915 D3** on enclosed inquiry slip



Need Rails—Switches—Frogs—Guard Rails or Track Tools? For best selections and prompt deliveries—try FOSTER—shipments of most items can be made from stocks in our five nationwide warehouses.

RAILS—New and Relaying Foster stocks are being replenished daily. Any items we did not have last week, we'll probably have next week. We match specifications and sizes to meet all your requirements on any job, new installations or replacements. *Call on Foster for all your needs for Industrial Track Equipment and Supplies.*

Write for Track Equipment Bulletin NE-4

L.B. FOSTER CO.

CHICAGO 4, ILL. HOUSTON 2, TEX.
PITTSBURGH 30, PA. NEW YORK 7, N.Y.

For more details circle **NED-916 D3** on enclosed inquiry slip

TO THE INGENIOUS

Not familiar with this

NEW INDUSTRIAL TOOL

Free Sample of Fullergript Brush Strip

What problems can you solve by adapting Fullergript to your equipment?

This brush strip can be coiled or twisted into numerous shapes. It can be formed to give intermittent or continuous brushing action. It adapts to stationary or power driven applications. How it may help *you* is a matter of your own ingenuity — plus the services of the Fuller Brush Engineering Dept. Find out what Fullergript can do by sending for a sample strip. We will also send a booklet showing its versatility. Simply write today.

The economy of continuous operation made possible by continuous scrubbing to remove hard baked deposits from steel conveyor in bake oven. Power driven unit applies action through two types of Fullergript brush strip.

INDUSTRIAL Fuller BRUSH CO. DIVISION

3530 MAIN STREET • HARTFORD 2, CONN.

Power driven brushes; Factory & Institutional cleaning tools, Waxes & Detergents

For more details circle **NED-917 D3** on enclosed inquiry slip

THE BEST IN DUAL ELEMENT FUSES

JEFFERSON *Thermal* **SAF-T-LAG FUSES**

Fuses have been an important Jefferson product for over 50 years. As one of a complete line of fuses, the SAF-T-LAG Dual-Element Thermal Fuse is the finest in design and affords the ultimate in circuit protection.

HERE'S HOW TO SELECT PROPER FUSE SIZES

For selection of correct Fuses for motors from 1/20 h.p. and up, refer to Folder 482-ST. Copy on request.

SAF-T-LAG FUSES

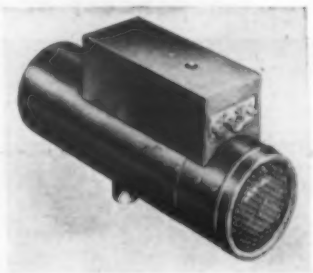
- Provide safe extra long time lag to avoid needless stoppages on heavy motor starting loads.
- Assure positive short circuit protection against costly damage to motors and connected equipment.
- The responsive thermal action guards against dangerous overheating of motors, panel boards, etc.

JEFFERSON ELECTRIC COMPANY
Bellwood, Illinois

★ *Ask your Wholesaler for Jefferson SAF-T-LAG Fuses*

For more details circle **NED-918 D3** on enclosed inquiry slip

ENGINE PREHEATER
for gasoline or diesel engines



With an output of 60,000 Btu, this heater for liquid-cooled gasoline or diesel engines can be used for preheating, stand-by heating or to give controlled booster heating while the engine is operating. Unit heats the engine coolant which in turn heats the engine. Exhaust gases from the heater can be used to heat the battery and can be directed into a special shroud provided for the oil pan to heat the lubricating oil. Heater action can be automatic with thermostatic control, or it can be manually controlled. It has electric ignition, a blower, its own fuel pump and thermostat and is adapted to use of gasoline, kerosene or No. 1 fuel oil. Use can be on trucks, buses, tractors or automobiles. Made by **Perfection Stove Co.**, 7890-A Platt Ave., Cleveland 4, O.

For more details circle **NED-919 D3** on enclosed inquiry slip

CARBIDE TOOL GRINDER
extremely rapid stock removal with 5 microinch rms finish is possible

Stock removals of better than 2.2 cu in. per hour of medium and hard tungsten carbide at light grinding pressure, plus finishes of better than 5 microinches rms are possible on this Dynatomic grinder for cemented carbide tools. Machine is powered by 10-hp 3500-rpm electric motor with ball bearing, enclosed armature and which operates on 220/440 v three-phase 60-cycle current. Table working area is 9¾ x 42 in., and that of auxiliary tilting table is 10 x 19 in. Longitudinal, knee vertical and gross feed travels are 13¼, 14¾ and 5 in., respectively.

Wheels used are semi-segmental type made of combination of abrasive and bond material and arranged in a structure and pattern for Dynatomic grinding. This process utilizes a Metalloid developed synthetic fluid which, during grinding, breaks down molecularly and releases nascent atoms of nitrogen, chlorine, hydrogen and oxygen. This atom release action reduces generation of heat to fraction of normal. Made by **Dynatomic Corp.**, Room 903, 7 S. Dearborn St., Chicago 3, Ill.

For more details circle **NED-920 D3** on enclosed inquiry slip

if it's FLAMEFOIL* CANVAS

It can't Blaze

...Contractors rely on Flamefoil tarps.

...Flame resistant windbreaks and shields.

...Flamefoil welding screens are in demand by industry

Send for a sample you can test to your own satisfaction. Please specify the approximate weight of duck desired.

Approved by the Underwriters' Laboratories of the United States and Canada, the Bureau of Standards and Appeals of the City of New York and the California Fire Marshal.

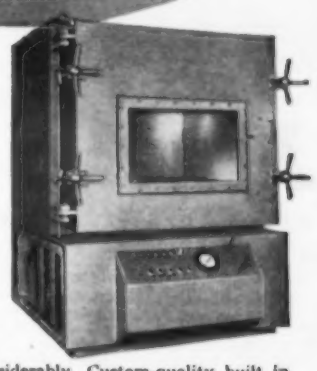
RESISTANT to
• FIRE • WATER
• WEATHER • MILDEW

**Manufactured under Patents Nos. 2,044,176 and 2,299,612 others pending.*

PHILADELPHIA TEXTILE FINISHERS Incorporated
108 Lafayette St.
Norristown, Pa.

For more details circle **NED-921 D3** on enclosed inquiry slip

New ALTITUDE SIMULATION CHAMBER



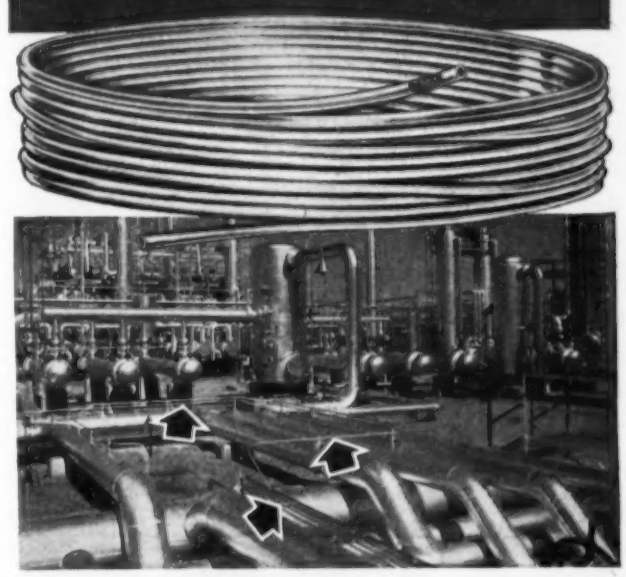
- Altitude Range to 120,000 feet.
- Temperature Range from 300°F. to —140°F.
- Micrometer Temperature Adjustments hold ±2°F.
- Compact Design . . . Requires less Floor Space
- Humidity Cycle available

Providing extreme flexibility in temperature and vacuum ranges, M & M Altitude Simulation Chambers give you precise control and easier, simpler operation that will reduce test costs considerably. Custom-quality built in every detail, M & M Chambers are designed to meet Government altitude simulation test standards. Available with many optional features to speed testing, such as Program Heating, Cooling, and Humidity Cycles, Automatic Recorder for controlling and integrating temperature, humidity and altitude. Write for details on Altitude SIMULATION Chambers as well as M & M Temperature Test equipment.

MURPHY & MILLER, Inc.
1224 South Michigan Avenue Chicago 5, Illinois

For more details circle **NED-922 D3** on enclosed inquiry slip

Save 40% with ALCOA UTILITUBE



Instrument air lines of ALCOA Aluminum Coiled Tube, still in good condition after five years of outdoor service at Sun Oil Company's Delhi (La.) Gasoline Plant, have required no maintenance since they were installed early in 1948.

ALCOA UTILITUBE* is aluminum coiled tube made of a specially selected alloy to provide low cost, easy workability and high fatigue strength.

Alcoa Utilitube offers savings up to 40 per cent over copper . . . has excellent on-the-job forming and flaring properties. It is available in economical, long lengths up to 1,000 feet or more, depending on size. It stands up well under vibration . . . has high resistance to most industrial atmospheres and to many liquids and gases.

Use Alcoa Utilitube for:

- Air for pneumatic and hydraulic control circuits and brake lines.
- Gasoline and fuel oil for internal combustion engines.
- Lubricating oils for engines and machines.
- Fluids for hydraulic systems.

For complete details, write for the new booklet: "Alcoa Utilitube."

ALUMINUM COMPANY OF AMERICA
1002-D Alcoa Building, Pittsburgh 19, Pa.

For process chemicals—catalysts, catalyst supports and desiccants—investigate ALCOA *Chemicals.*

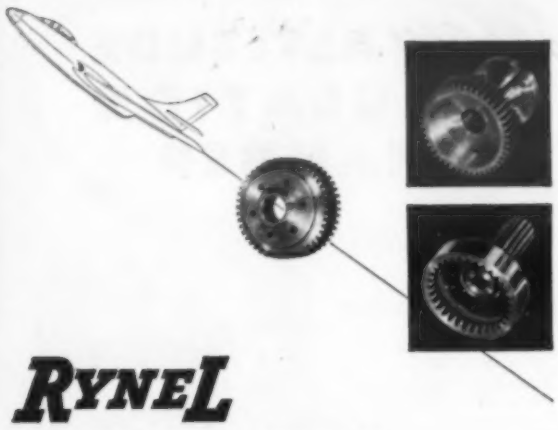
*Registered Trademark, Aluminum Company of America

Alcoa Aluminum

ALUMINUM COMPANY OF AMERICA

For more details circle **NED-923 D3** on enclosed inquiry slip

New Concepts in Fine-Pitch Gear Supply!



RYNEL

AIR-FREIGHT SERVICE

Want high-quality fine-pitch gears in a hurry? Rynel speeds them to you via unique private air-freight service.

Keeping you ahead of critical production deadlines is part of Rynel's complete design-to-delivery service. Starting with custom engineering to meet your exact needs, Rynel maintains rigid quality control through every production phase — assures you high-volume, fine-pitch gear supply at minimum cost.

Rynel's private air-lift also serves you conveniently . . . swiftly takes you to the Rynel plant or brings an engineer to you. For prompt, problem-solving service — contact Rynel today.

Rynel supplies precision FINE-PITCH GEARS . . . for all major Electronics — Aviation — Navigation applications.

A Rynel Engineer will visit you the same day you call.

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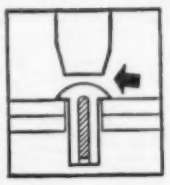
Spur • Helical • Worm • Worm Gear • Internal Segment • Sprocket • Ratchet • Straight Bevel

▲ For more details circle **NED-924 D3** on enclosed inquiry slip ▲

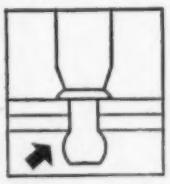
Brass, Nickel or Aluminum Alloy—

DU PONT EXPLOSIVE RIVETS

Cut Fastening Time



1. Touch head of Explosive Rivet with heated Du Pont Riveting Iron. (Note tiny explosive charge in Rivet shank.)



2. Quickly . . . in as little as ½ second . . . charge expands, forming a barrel-shaped head on shop end of Rivet.

Du Pont Explosive Rivets are available in brass, nickel or aluminum alloy. They're designed to meet every fastening requirement . . . speed the work. When rivet shank expands, it locks materials together. One man does the job, setting 20 to 25 a minute—even in tight corners. No after-finishing needed. Write for handbook showing how Explosive Rivets save time. Contact nearest Du Pont Refinish Service Warehouse or E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., 2535 Nemours Bldg., Wilmington 98, Del.

DU PONT *Hi-Speed*
INDUSTRIAL EXPLOSIVE RIVETS

A Product of Du Pont Explosives Research

DU PONT — Better Things for Better Living . . . through Chemistry

▲ For more details circle **NED-925 D3** on enclosed inquiry slip ▲

AGASTAT

Compact . . . Dust-Proof

TIME DELAY RELAYS

solenoid actuated—pneumatically timed

Introduces time delays into a-c or d-c circuits. Easily adjusted to provide delays ranging from 0.1 second to five or more minutes.

The AGASTAT is small, light, and operates in any position. Dust-proof timing chamber assures long operating life with a minimum of maintenance.

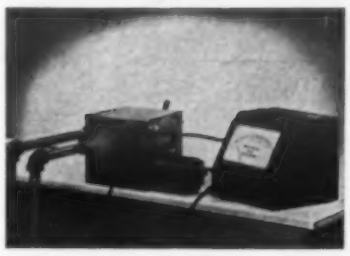
Write for Bulletin. Dept. A1-45.

AGA

Division of Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth 3, New Jersey

▲ For more details circle **NED-926 D3** on enclosed inquiry slip ▲

MASS FLOWMETER
reads in pounds per minute and is independent of volume or pressure

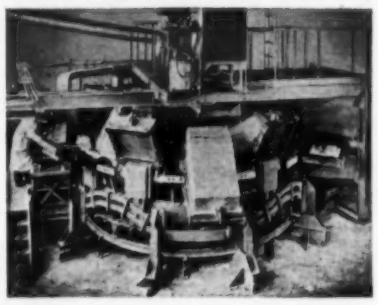


True mass rate of flow of anything that will flow or fall through a pipe can be measured by this flowmeter which responds to pounds, but is insensitive to volume. Direct readings in terms of pounds per minute, or with integration, pounds, can be made on gases, liquids, slurries, or air stream particles. Accuracy is independent of volume, temperature, pressure, viscosity, compressibility, or external accelerations.

Measurement is made of torque necessary to give flowing mass a Coriolis acceleration. This torque is dependent only on dimensions of flowmeter, a rotational speed and the mass flow. Two or more units used with a proportioning unit can control any mixture in an industrial process. Weight flow measurements in petroleum distribution systems for loading tank cars, or weight mixing control in chemical plants are other applications. Meter is custom built for each job. After most vital industrial and military needs are met first, units will be generally available. Developed by **Control Engineering Corp.**, 560 Providence Highway, Norwood 128, Mass.

▲ For more details circle **NED-927 D3** on enclosed inquiry slip ▲

SHELL MOLDING MACHINE
makes about 500 molds per hour and is completely automatic

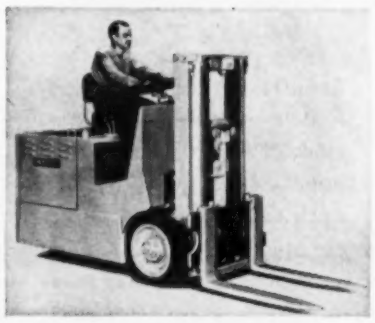


Automatic in operation, this 12-station machine operated by one man can make approximately 500 shell molds per hour. Pattern size on the standard machine is 28 x 22 in. Machine operation begins at left in photograph and progresses counterclockwise until the finished shell mold is removed from the pattern. Next, the pattern carriage moves up and engages the sand-resin hopper to be clamped tightly together.

After material falls on the pattern and shell mold is formed, pattern carriage enters the oven, heated by gas-fired radiant burners. When fully cured, it emerges at station at far left in photograph. Here mold release pins lift automatically, the mold is removed and the cycle begins again. Automatic proportioning system for sand, resin and wetting agent is on top of machine. Pattern plates can be changed without stopping the machine. Made by **Mechanical Handling Systems, Inc.**, 4709 Nancy Ave., Detroit 12, Mich.

▲ For more details circle **NED-928 D3** on enclosed inquiry slip ▲

FORK TRUCK
4000-lb capacity sit-down model features increased free lift



Improvements made in model 430 Yak fork truck, a 4000-lb capacity sitdown unit, include increase in maximum fork elevation to 130 in., increase in free-lift from 25 to 58 in., travel speed of 6.5 mph and shortening of outside turning radius to 79 in. Truck can now right-angle stack in 10 ft 6 in. aisles with 36-in. long loads. Low pressure hoist system employs a single hoist cylinder with balanced cross suspension.

Truck incorporates self-energized hydraulic brakes, universal-joint-connected drive motor, self-actuated Timken Duogrip mechanical parking brake and detachable drive wheel rim and tire assembly for faster tire changing. Four-speed magnetic contactor travel control permits foot-actuated timed acceleration and controlled plugging of drive motor. Made by **Mercury Mfg. Co.**, 4038 S. Halsted St., Chicago 9, Ill.

▲ For more details circle **NED-929 D3** on enclosed inquiry slip ▲

RUBBER-TO-METAL BONDING

Through modern compounding and adhesive techniques developed in the Acushnet laboratories, the best properties of metal and rubber (natural & synthetic) can be combined in one bonded unit to obtain strength, toughness and resiliency, as well as shock and vibration absorption, sound abatement, electrical insulation or conductivity, corrosion and abrasion resistance, etc. Our engineers will gladly study your prints and make prompt recommendations.

Acushnet PROCESS COMPANY

Send for your copy of Acushnet illustrated catalog supplement—"Rubber-to-Metal Bonding"

Address correspondence to 782 Belleville Ave., New Bedford, Mass.

▲ For more details circle **NED-930 D3** on enclosed inquiry slip ▲

Continuous Flow UP or DOWN

Above. 200-pound cartons, brought down from 3rd floor on OLSON Subveyor, being manually unloaded onto wheel conveyor in shipping department. Operator rolls carton onto conveyor easily with one hand. Automatic loading from feeder conveyor or automatic unloading onto delivery conveyor can be furnished.

OLSON Industrial Subveyors move anything from roofing boards to tote boxes, heavy cartons and boxes, up or down—in continuous flow—at speeds to thirty per minute, with automatic loading and unloading.

Automatic controls provide high efficiency and great space economy in processing, drying, finishing, etc., as well as in moving materials from floor to floor. Send for literature.

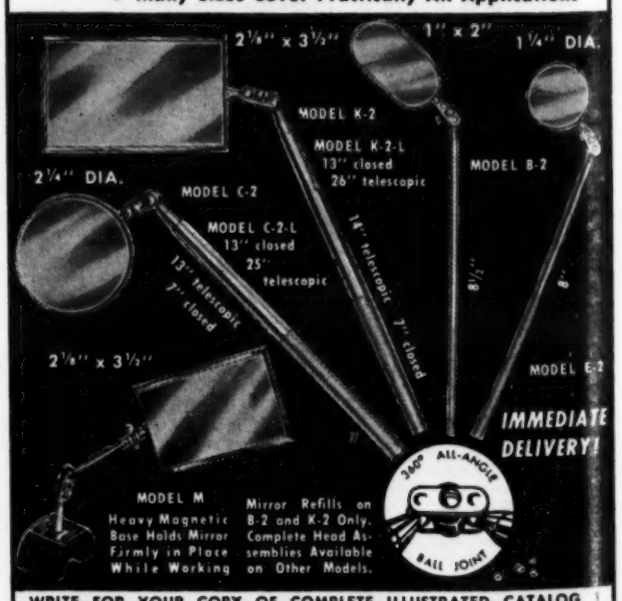
SAMUEL OLSON MFG. CO., INC.
2423 Bloomingdale Ave., Chicago 47, Ill.

▲ For more details circle **NED-931 D3** on enclosed inquiry slip ▲

WORK INSPECTION MIRRORS

speed production • prevent accidents

- Exclusive All-Angle Ball Joints
- Precision Engineered
- Replaceable Copper-Backed Clear View Mirrors
- Folds and Fits into Pocket
- Many Sizes Cover Practically All Applications



WRITE FOR YOUR COPY OF COMPLETE ILLUSTRATED CATALOG

ULLMAN PRODUCTS CORPORATION
156 PROSPECT AVE., BROOKLYN 15, N. Y.

▲ For more details circle **NED-932 D3** on enclosed inquiry slip ▲

"MX" ABRASIVE PRODUCTS...Versatile, fast-cutting, self-cleaning, safe, long-lasting

Source: THE CARBORUNDUM COMPANY Niagara Falls, New York

"MX" abrasive products by CARBORUNDUM do such varied jobs as reducing and blending stainless steel welds in one operation... cleaning out dainty designs on sterling silver...cutting through one inch black pipe in seconds.

Fast-cutting, they finish as they cut. The special "MX" bond provides "cushion action"—reducing vibration and giving a smooth, uniform finish.

Self-cleaning. "MX" abrasive products cut clean ...resist loading even on soft metals, such as aluminum, or on plastics, glass and other non-metallics.

Safe—they resist impact and heat shock. They operate efficiently, safely—on portable or stationary equipment.

Long-lasting—"MX" abrasive products remain usable right down to the arbor, shank or nut.

"MX" abrasive products come in seven useful forms: straight wheels, mounted wheels, sticks, depressed center wheels, discs, general purpose cut-off wheels, and production cut-off wheels.

Get full information from your CARBORUNDUM distributor today. Or send for your free copy of "MX Products" by circling the inquiry number—or write to us, addressing Dept. NED 81-310.

"Carborundum" and "MX" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, N.Y.

81-310

▲ For more details circle **NED-933 D3** on enclosed inquiry slip ▲

For Quick, Permanent Roofing

on any type of structure

TRUSCON FERROBORD® STEEL ROOFDECK

This strong, lightweight, steel roofdeck can be applied to any flat, pitched or curved roof structure. Large areas can be covered quickly. The members are so designed and formed that each unit firmly interlocks with the adjoining unit along the full length, achieving the maximum in lateral distribution of concentrated loadings. The members are fabricated in units long enough to span over three or more purlin spacings.

Ferrobord is manufactured from both 20-gage and 18-gage copper-bearing strip steel. Each unit is 6 inches wide and has a depth of either 1½" or 1¾". WRITE FOR FREE BOOKLET!

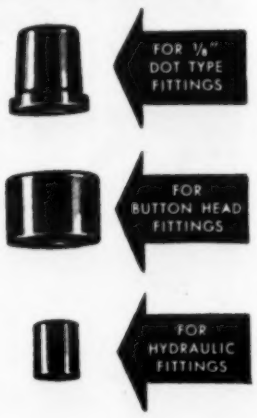
TRUSCON MARK OF MERIT PRODUCTS

TRUSCON® STEEL DIVISION
REPUBLIC STEEL CORPORATION
1096 ALBERT STREET • YOUNGSTOWN 1, OHIO

▲ For more details circle **NED-934 D3** on enclosed inquiry slip ▲

Keep Lubrication Fittings Clean

Here's a tip that will help cut maintenance costs and prolong bearing life . . . use these inexpensive flexible plastic caps on your lubrication fittings. They'll keep the fittings free from the dirt and grit that's often forced into the bearings when the grease gun is applied. The caps can be slipped on and off with ease — and once on, won't shake loose. They're also unaffected by oil, grease or water.



Sizes for Hydraulic, Button Head or ⅛" Dot Type Fittings. Order a supply.

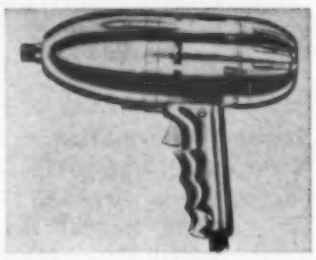
THE S.S. White PLASTICS DIVISION
DENTAL MFG. CO. Dept. 7P, 10 East 40th St. NEW YORK 16, N. Y.

WESTERN DISTRICT OFFICE: Times Bldg., Long Beach, Calif.

▲ For more details circle **NED-935 D3** on enclosed inquiry slip ▲

ELECTRIC IMPACT TOOL

performs wide variety of operations



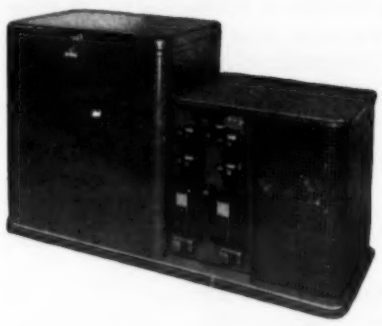
Running and removing bolts up to ⅝-in., tapping, threading, drilling, reaming, screwdriving, hole sawing, wire brushing, masonry drilling and wood boring are operations that can be performed by this electric impact tool. Weighing only 6¾ lb, it has a universal 115-v ac-dc motor which runs continuously under all conditions and cannot be burned out. As soon as the torque load on the drive spindle builds up to a certain point, the rotary action is changed into 2000 sharp blows per minute. Normal clockwise rotation is easily changed by turning the rear end cap. Made by **Syntron Co.,** 405 Lexington Ave., Homer City, Pa.

▲ For more details circle **NED-936 D3** on enclosed inquiry slip ▲

INDUSTRIAL CHILLING MACHINE

temperatures range to —140° F

A chilling capacity down to 140° F below zero for moderate scale production needs is provided by model T-120 chilling machine. Thermal capacity is 1200 Btu per hour at −120° F, enough to chill 50 lb of steel an hour from 80° F to −120° F. Heavy gage steel chamber has capacity of 7.5 cu ft. Accessible ½ and ¾-hp motors are provided. Temperature can be controlled from −70° to −140° F. Unit is suited to transformation of austenite in alloy steel, stabilization of steel, normalizing of castings, parts and material testing and similar operations. Made by **Sub-Zero Products Co.,** 3928 Reading Rd., Cincinnati 29, O.



▲ For more details circle **NED-937 D3** on enclosed inquiry slip ▲

THREADING UNIT

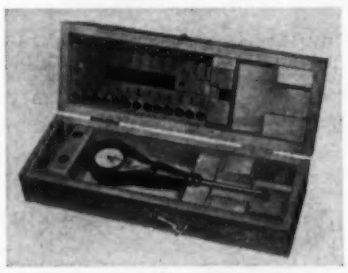
mounts in most any position

Used with Murchey collapsible taps and self-opening die heads, Precision-Pak self-contained threading unit powered by 3-hp motor is suited for shell tapping, rocket threading and aircraft, automotive and similar operations. Direct precision lead is maintained throughout 4-in. feed travel by quick change lead screw and collapsible lead nut head on rear end of spindle. At end of travel, lead nuts disengage and rapid spindle return is obtained through planetary gear clutch. Unit mounts horizontally, vertically or angularly in single, double end or multiple installations. Made by **Sheffield Corp.,** 721 Springfield St., Dayton 1, O.

▲ For more details circle **NED-938 D3** on enclosed inquiry slip ▲

CENTERING-SIZE DISKS

designed for small bore gage



Use of centering-size disks with Standard No. 00 dial bore gage enables it to measure any bore within overall range of ¼ to ⅜-in. Previously this gage was offered as a "single-hole" gage to be furnished with a centering-size disk for checking one dimension specified by the user. Centering-size disk set consists of 27 disks mounted on a rectangular plate. Disks are interchangeable on the head. Gage itself has sapphire tipped gaging plungers, indicator graduations of 0.0001-in. and ability to check to within 1/16-in. from the bottom of a blind hole. Made by **Standard Gage Co.,** 200 Parker Ave., Poughkeepsie, N. Y.

▲ For more details circle **NED-939 D3** on enclosed inquiry slip ▲

A new Irvington Class "B" Insulation--IRV-O-BESTOS®

Quinterra* asbestos and Mylar—a tough, strong polyester film with the highest dielectric strength known—are bonded together in various thicknesses to form IRV-O-BESTOS, a new Class "B" insulation by Irvington.**

Since Quinterra comes in thicknesses from .003" to .015", and Mylar from .0005" to .007", a very large number of combinations are available—in duplex constructions or in triplex with either Quinterra or the Mylar on the outside—depending on dielectric and cost requirements.

Write for technical data and samples on IRV-O-BESTOS.

*Johns-Manville Corp. trademark **du Pont trademark

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON
VARNISH & INSULATOR COMPANY
14 Argyle Terrace, Irvington 11, New Jersey

Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

▲ For more details circle **NED-940 D3** on enclosed inquiry slip ▲

IF YOUR ANSWER IS "NO" TO ANY OF THESE QUESTIONS

THE NESTIER SYSTEM

CAN REDUCE YOUR COST OF SMALL PARTS HANDLING

CHECK	YES	NO	NESTIER
Can your present shop boxes be nested to save space?			Yes
Can your present shop boxes be tiered in a rigid stack, efficiently, neatly?			Yes
Are parts visible, easy to withdraw, when boxes are tiered?			Yes
Can you degrease parts without changing containers?			Yes
Are stock fiber liners and dividers available to eliminate parts damage?			Yes
Are your boxes designed for movement by any conveyor, pallet or skid?			Yes
Are your shop boxes easily, safely carried by hand?			Yes
Can your boxes, without shelving, be used as movable stockroom fixtures?			Yes

Yes, THE NESTIER SYSTEM does everything modern shop boxes should do —and WE CAN PROVE IT!

Give us the opportunity and we'll be on the spot to prove how the NESTIER SYSTEM eliminates loss of time, space and motion . . . reduces handling hazards . . . speeds up production.

Write now and we'll have one of our materials-handling engineers arrange for a demonstration in your plant at your convenience.

IT NESTS—IT TIERS

Heavy-gauge steel interchangeable boxes or baskets in two standard sizes.

NESTIER®

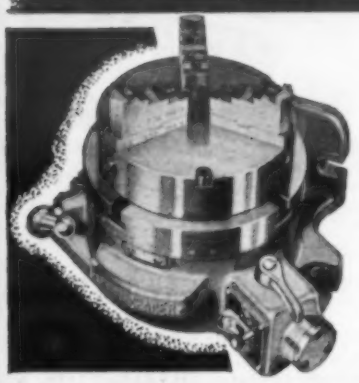
The Chas. Wm. Doepke Manufacturing Co., Inc. Rossmoyne, Ohio

5th NATIONAL MATERIALS HANDLING EXPOSITION MAY 18-22, 1953 PHILADELPHIA

BOOTH 714

▲ For more details circle **NED-941 D3** on enclosed inquiry slip ▲

New Indexing Fixture with Built-in Selector



THE NEW GORTON Multi-Spacer

A time-saver for all types of milling, drilling, boring and grinding operations. Eliminates extra job set-ups. Features built-in automatic selector; permanent index discs; no loose parts — no discs to change; 9" dia. table; sealed mechanism; vertical or horizontal set-up; milled base for ½", ⅝" or 11/16" keys. Available with seven positions . . . 2, 3, 4, 6, 8, 12 and 24 divisions.

FREE BULLETIN!

For detailed information on the Multi-Spacer and numerous other Gorton Time-saving Machine Tool Accessories write today for Free Bulletin No. 1317.

GEORGE GORTON MACHINE CO.
1904 RACINE ST., RACINE, WISCONSIN

▲ For more details circle NED-942 D3 on enclosed inquiry slip ▲

Get these BULLETINS...

Learn how these

RAYMOND

HYDRAULIC TRUCKS & TABLES
can cut costs, save time in your plant. Fill in and mail the coupon below for bulletins now!

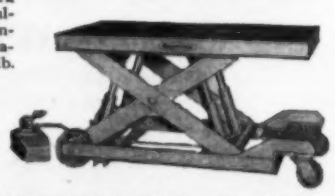
Lightweight PALLET LIFT TRUCK
Watch one man handle 2,000 lb. loads with this *Raymond* Pallet Truck! Hydraulic power does heavy lifting. Separate pedals for lifting and lowering—270° turning radius.

Heavy Duty PALLET LIFT TRUCK

SKID LIFT TRUCK

Handle heaviest loads with ease with this rugged *Raymond* Truck! It's fully hydraulic, has exclusive finger-tip lowering, 360° turning radius. 4,000 or 6,000 lb. capacities.

Put this *Raymond* Truck to work handling skid loads! It's hydraulically operated, has exclusive finger-tip lowering, 360° turning radius. 2,500; 4,000 or 6,000 lb. capacities.



SHEET & STRIP FEEDING TABLE
Feed sheets faster at presses, cutting machines, forming equipment with this *Raymond* Table. Keeps material at correct working level. 2,000 to 20,000 lb. capacities.

Portable ELEVATING TABLE
Use this *Raymond* Table for die handling, sheet feeding, work positioning or loading! Features 30" square top, 2,000 lb. capacity. Standard Model elevates from 28" to 44"—Telescopic Model, from 28" to 50".

HIGH LIFT TRUCK
Pick this *Raymond* Truck if you do die handling, loading, work positioning, ceiling maintenance!
It's a lift truck and tiering truck combined. Hand or electrically-driven hydraulic power unit, 60" or 108" elevated height. 1,000 lb. capacity.

GET THE FACTS

The RAYMOND CORPORATION
4112 Madison St., Greene, N.Y.

Please send me Bulletins describing: ☐ 2,000 lb. Pallet Truck; ☐ 4,000 lb. Pallet Truck; ☐ Skid Truck; ☐ Portable Elevating Table; ☐ Sheet & Strip Feeding Table; ☐ High Lift Truck.

NAME_____ TITLE_____
COMPANY_____
STREET_____
CITY_____ STATE_____

▲ For more details circle NED-943 D3 on enclosed inquiry slip ▲

New Literature and Catalogs

Tapping Information

Threadwell Tap & Die Co.—A wealth of tapping information is packed in the 56 pages of this pocket-size "Tapping Manual" designed for use right in the shop. Helpful information on common tapping problems in addition to tables of specifications, speeds, etc., are featured. Manual defines tap and thread terminology and offers formulas for various threads.

▲ For more details circle NED-944 D3 on enclosed inquiry slip ▲

Collet & Feeders

Sutton Tool Co.—Every size and type collet offered by company is listed in 12-page catalog 18 along with specifications and prices. Collets, feeders and pads for automatics, hand machines, turret lathes, milling machines, production and engine lathes are covered. Special adapters, tool holders, sleeves, collet and feeder tubes, bushings, mandrels and boring bars are covered as well.

▲ For more details circle NED-945 D3 on enclosed inquiry slip ▲

Bulk Loading & Unloading Equipment

OPW Corp.—Compactness of spring-balanced pipeline loading assemblies and bulk plant loading and unloading equipment makes them especially adaptable for narrow loading platforms, closely spaced riser outlets or risers close to walls. This equipment is effectively described with pertinent engineering data in 24-page illustrated catalog F-7. Section on swing joints is included.

▲ For more details circle NED-946 D3 on enclosed inquiry slip ▲

Central Vacuum Cleaning System

Lamson Corp., Billmyre Blower Div.—20-page booklet D-5 employs text, diagrams and photos to describe Exidust central vacuum cleaning system. This system picks up dust, dirt and small particles by means of a flexible hose and attachments and passes them through stationary piping system to one or more collector separator tanks. Integral exhauster and motor unit provide required vacuum.

▲ For more details circle NED-947 D3 on enclosed inquiry slip ▲

Industrial Elevators & Portable Cranes

Barrett-Cravens Co.—Complete line of industrial elevators with load capacities from 500 to 5000 lb and portable cranes with fixed or revolving bases are covered in descriptive 36-page bulletin 5211. Hand and electrically operated elevators with single, hinged and telescopic uprights are shown. Cable safety device, protected sheaves, thermal overload switch, slack cable switch, fully enclosed gears and automatic hinges are among safety devices featured.

▲ For more details circle NED-948 D3 on enclosed inquiry slip ▲

Plastic Pipe Data

Carlon Products Corp.—Two illustrated "Answer Sheet" leaflets give factual answers to 22 most frequently asked questions about Carlon flexible and rigid plastic pipe. Installation precautions, weights for ½ to 6-in. pipes, assembly procedures, making of leakproof connections with plastic fittings and joining to existing metallic pipelines are some of the subjects treated.

▲ For more details circle NED-949 D3 on enclosed inquiry slip ▲

Products & Parts Assembly

Milford Rivet & Machine Co.—"The Milford Method" is a 12-page brochure that discusses an integrated service of fastener research, design, application engineering and production collaboration. Engineering services described include fastener research to determine the exact requirements of individual cases, development of designs for the fastener and dies to produce it, laboratory testing of samples, tooling of machines for setting fasteners and final checking in actual production.

▲ For more details circle NED-950 D3 on enclosed inquiry slip ▲

Pocket Size Technical Data Books

Lefax—Over 2000 subjects are listed in this catalog of pocket size technical data books. All books listed are $1.00 each and cover many branches of engineering and have about 140 pages. Among subjects available (all are indexed in the catalog) are hydraulics, piping data, metallurgy, reinforced concrete, electricity ad-dc, relays, meters, lumber data, general math and mechanical drawing.

▲ For more details circle NED-951 D3 on enclosed inquiry slip ▲

This Free Book tells you how to speed-up grinding and polishing 300%

Here's valuable information on how to grind and polish better—faster—cheaper . . . how to eliminate herringbone patterns and swirl marks . . . how Nu-Matic Air-Inflated Grinders provide up to 3,000% greater abrasive contact area than hard-type wheels. Send today for Nu-Matic Book No. 6353.

H-104

NU-MATIC GRINDERS, INC.
8223 Carnegie Ave. • Cleveland 3, Ohio

▲ For more details circle NED-952 D3 on enclosed inquiry slip ▲

BAR-L* VAPOR DEGREASER

Economical, Trouble-Free, Parts Cleaning!

* Patent Pending

Bar-L Vapor Degreaser cleans all metal parts, removes sludge, grease, dirt in seconds! And your parts come out warm and dry.

So designed that the heating element is in no danger of damage from dropped parts or insulated by settled residues, Bar-L Degreaser cleans anything that will fit into the solvent drum!

Economy of operation is assured by a record of trouble-free service. Almost 100% recovery of the solvent is made possible by the design of the condenser which returns the solvent to the boiling chamber. Continuous, high production is a fact with Bar-L!

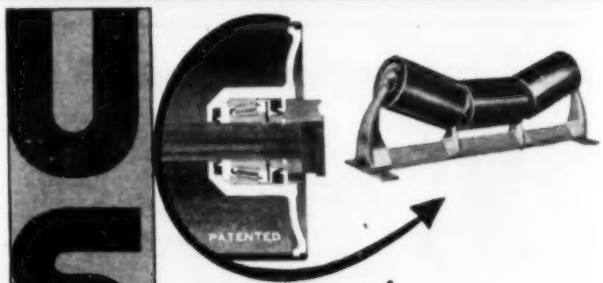
If your requirements indicate tanks larger than the standard 55 gallon drum, several units may be used together in larger tanks.

Literature on standard degreasers and information on custom machinery is yours for the asking.

Write or wire today!

Manufacturers Processing Co.
METAL CLEANING CHEMICALS AND EQUIPMENT
1360 HILTON ROAD DETROIT 20, MICHIGAN

▲ For more details circle NED-953 D3 on enclosed inquiry slip ▲



UST

Saves Grease! Saves Labor! Saves Belts!

If You Use Belt Conveyors You Need

CONTINENTAL IDLERS

• UNIT-SEALED
• TIMKEN BEARINGS
• PRE-LUBRICATED

Write for Bulletin NED-116

ALL SIZES! ALL TYPES!

CG-5301

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
Birmingham 2, Ala.
ATLANTA • DALLAS • MEMPHIS • NEW YORK

▲ For more details circle NED-954 D3 on enclosed inquiry slip ▲

Send for this FREE BOOKLET

A Directory of Technical Data Available From Arcos To Help You On Your Welding Jobs

Whether your problem involves welding stainless, low alloy-high tensile, or non-ferrous metals, this handy Directory will tell you quickly the wealth of practical information available from Arcos for your use. Right at your fingertips it places a convenient recap on what Arcos offers, such as: **Application Chart and Weld Metal Analysis on 56 Different Arcos Electrodes; Stainless Electrode Selector For Welding Stainless Steels; ABC's of Welding High Tensile Steels; plus informative charts, electrode data sheets, reprinted articles on welding, technical guides, etc.**

Send for your copy today. Ask for booklet #10528. There's no obligation. And for dependable welding results at all times, WELD WITH ARCOS STAINLESS, LOW HYDROGEN and NON-FERROUS ELECTRODES.

ARCOS CORPORATION
1500 South 50th Street • Philadelphia 43, Pa.

For more details circle NED-955 D3 on enclosed inquiry slip

Speed wiring jobs with 2020 CONNECTORS
(for non-metallic sheathed cable)

Just an easy finger squeeze — that's all it takes to snap a T & B 2020 connector into a junction box. Deep body grooves hold the connector in ½-inch knockouts while the one-screw tightening clamp grips the cable tightly without damage to insulation. With no loose parts and no locknuts to handle, you'll find jobs going faster than with ordinary locknut-type connectors.

T & B has designed the 2020 connector for installation from either *inside* or *outside* of the box. *Inside* installation is particularly helpful for work in old buildings. You eliminate damage to adjacent floors or walls. You keep installation costs to a minimum.

The wide-range adjustability of the T & B 2020 connector cable clamp makes it ideal for use on portable cords and the new small-diameter, plastic-sheathed cables as well as standard non-metallic sheathed cable in sizes 14-2 to 10-3 — 2 or 3 wire. Full Underwriters' Laboratory Approval has been granted. For complete details, write for a descriptive folder. T-310

THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada
MANUFACTURERS OF FINE ELECTRICAL FITTINGS SINCE 1898

For more details circle NED-956 D3 on enclosed inquiry slip

For the SMALLER HOLES the MORE ACCURATE HOLES

HAMILTON VARIMATIC® DRILLING MACHINE
SUPER SENSITIVE VARIABLE SPEED

DRILLING CAPACITY
.004" to 0.3125"
in all drillable materials.

SPINDLE SPEEDS
840 to 9300 R.P.M.
(Infinitely variable.)

CLEARANCE
Drills to the center of 10"

MAINTAINS PRODUCTION REDUCES SCRAP

The Hamilton Varimatic is *designed and built* for the production, in volume, of extra accurate holes.

Write for FREE Bulletin D-5311.

THE Hamilton TOOL COMPANY
901 HANOVER STREET • HAMILTON, OHIO • U • S • A

For more details circle NED-957 D3 on enclosed inquiry slip

New Processes and Materials

RESIN ADHESIVE
bonds nonporous materials together and resists water, acids and alkali

Metal, glass, natural or synthetic rubber, ceramic materials, wood, and phenolic and glass fiber laminates are bonded together or to each other securely with Epiphen XR-823 epoxide resin adhesive. The cured bond is resistant to boiling water, acids, alkalies and most organic solvents. When unfilled resin is used, adhesive is transparent and can be used in production of lenses.

This type of resin is also recommended for any casting and coating operations where shrinkage cannot be tolerated. It has excellent wetting properties, fidelity, high dielectric and mechanical strengths, and high heat resistance in cast form. These properties adapt epoxides for potting electronic assemblies, resistors and other electric and electronic components. Test kits of Epiphen XR-823, containing 2 oz of resin, plus the necessary catalyst and filler together with instructions, are available to industrial firms at a cost of $1.50, postpaid. Developed by **Borden Co.**, Chemical Div., Dept. NED-1, 350 Madison Ave., New York 17, N. Y.

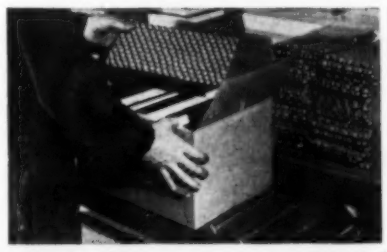
For more details circle NED-958 D3 on enclosed inquiry slip

RUBBER-BASE PAINT
offers protection from corrosion

Long protection against corrosive action of chemicals, caustic cleaners and moisture on metal surfaces and machinery used in bottling and food processing industries is provided by Metakote rubber-base enamel. When immersed in a 5 per cent caustic soda solution at 140° F, a panel covered with the paint showed only slight and temporary loss of luster after 27 hours of immersion. Enamel is available in various colors. Made by **Tropical Paint & Oil Co.**, 1150-1300 W. 70th St., Cleveland 2, O.

For more details circle NED-959 D3 on enclosed inquiry slip

PROTECTIVE PACKAGING
uses honeycomb kraft and board liner



A bottle neck in packaging of books in corrugated boxes was removed by replacing corrugated board spacers with cut-to-length buffers consisting of honeycomb - shaped kraft paper faced on one side with kraft liner board. Cutting and folding operations previously required are eliminated and packaging time is speeded. Buffer was developed by **Union Bag & Paper Corp.**, Dept. 3433, 233 Broadway, New York 7, N. Y.

For more details circle NED-960 D3 on enclosed inquiry slip

PROTECTIVE FLOOR COATING
resists oils, acids, water, gasoline

A decorative as well as protective coating for wood, brick, composition and other floor surfaces, Colorflex Plus AWA resists alkali in cement and is not affected by battery, fruit or lactic acids; water; mineral oils; grease; or gasoline. Penetrating synthetic resin base makes coating especially practical for painting and sealing of concrete. Red, gray, brown, green and clear are available colors. Developed by **Flexrock Co.**, 3603 Filbert St., Philadelphia 4, Pa.

For more details circle NED-961 D3 on enclosed inquiry slip

Difficult Rubber Molding Problem ???

Consult COLONIAL

Colonial Rubber Co. technicians are masters of the art of specialized and individual compounding to meet highly exacting requirements. Whether your problem involves high or low temperature, specific factors in hardness, shear, or tensile strengths, resistance to oil and chemicals — you can trust it with sureness to COLONIAL.

121C

COLONIAL RUBBER CO.
Industrial Rubber Products
RAVENNA, OHIO

For more details circle NED-962 D3 on enclosed inquiry slip

To get better prints ... faster

Tapco Plant, Thompson Products, Inc., uses Kodagraph Autopositive intermediates in print production.

The Tapco Plant knows full well that illegible shop prints pave the way for costly reading errors; knows, too, that Kodagraph Autopositive intermediates are low-cost insurance against such a possibility.

It therefore reproduces its more critical and complex jet and valve drawings on Kodagraph Autopositive Paper Translucent and thus obtains—quickly and easily—sparkling "masters" for print making which have dense photographic black lines on an evenly translucent, premium-quality paper base; *which* will produce highly legible whiteprints time after time at *stepped-up* machine speeds.

Extremely fine-detailed drawings are reproduced on Kodagraph Autopositive Film, which captures the faintest detail . . . keeps close lines from "filling in" . . . and produces top-quality photographic intermediates with extremely fast print-back speeds.

No negative step . . . no darkroom handling. Kodagraph Autopositive Paper and Film are handled in exactly the same manner . . . produce positive photographic intermediates *directly*. First, they are exposed in one of the Tapco Plant's direct-process machines—or in a photocopy unit. Then, they receive standard photographic processing. A fast, convenient room-light operation all the way. And no new equipment needed.

Write today for a free copy of "Modern Drawing and Document Reproduction." It gives complete details on the revolutionary line of Kodagraph Reproduction Materials, which you, or your local blueprinter, can process conveniently, economically.

Kodagraph Autopositive Materials
"THE BIG NEW PLUS" in Engineering Drawing Reproduction

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak TRADE MARK

For more details circle NED-963 D3 on enclosed inquiry slip

New PRECISION CASTING Movie Available

22 Minute Full-Color—Available FREE

Here is the story of precision investment casting . . . the revolutionary Microcast Process that started a whole new metalworking industry. In this film you'll see the complete Microcast story . . . its development . . . the step-by-step process for mass producing investment castings . . . how it cuts costs and produces parts and components that are stronger, longer lasting. If you're a design engineer or a metallurgist you'll want to see this exciting film.

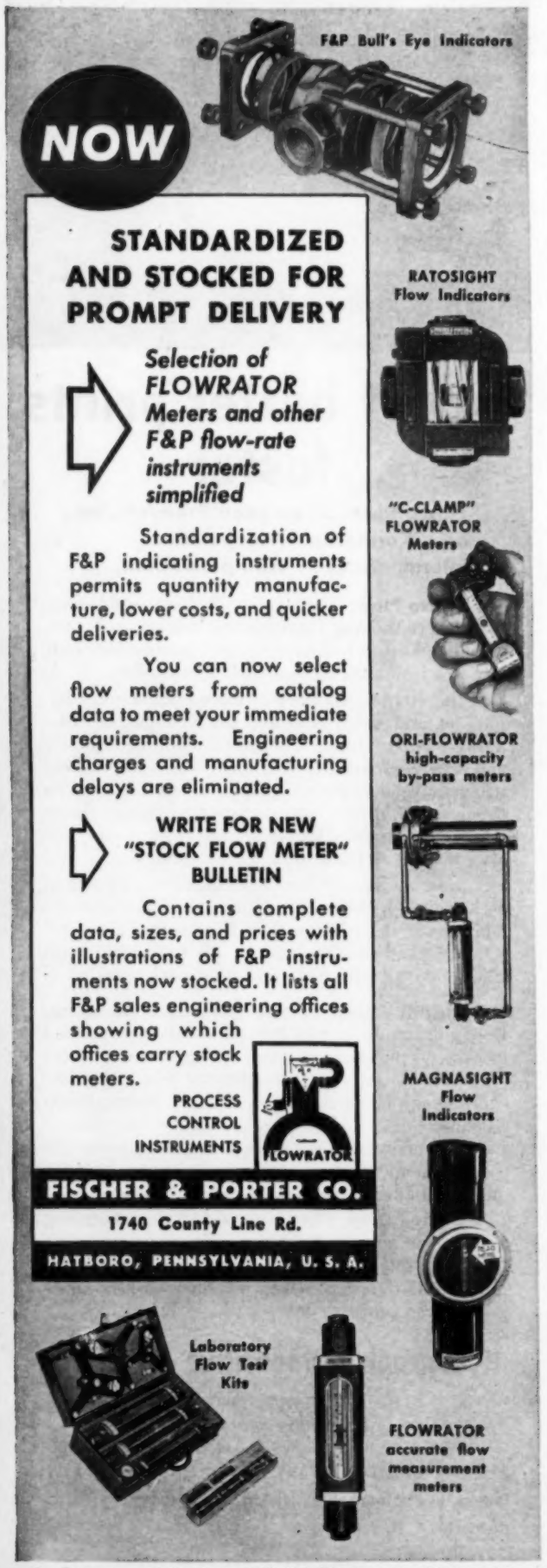
For full information write to:

MICROCAST PRECISION CASTINGS PROCESS

microcast®

MICROCAST DIVISION • Austenal Laboratories, Inc.
224 East 39th Street, New York 16, New York

▲ For more details circle NED-964 D3 on enclosed inquiry slip ▲



▲ For more details circle NED-965 D3 on enclosed inquiry slip ▲

New Literature & Catalogs

Torque Tools & Testers

Richmont, Inc. — Hi-Lo Torq wrenches, Roto-Torq screwdrivers, torque testers and calibrators are pictured and specified with latest prices in 16-page catalog entitled, "Proper Torque." Wrenches and square head drives range in capacity from 100 to 1600 in. lb, while tester shown features four stations covering 1 in. lb to 7500 ft lb testing range.

▲ For more details circle NED-966 D3 on enclosed inquiry slip ▲

Heavy Duty Rotary Pumps

Worthington Corp.—Fields of application, coverage charts, mountings and dimensions relative to heavy duty rotary pumps are covered in 16-page bulletin W-483-B2. Featured are the Herringbone gear type with 5000 gpm capacity at 100 psi and the Sliding-Vane type with capacities to 1000 gpm at pressures to 200 psi. A viscosity conversion table, data on relation of A.P.I. Hydrometer scale to specific gravity and a viscosity-temperature chart for fuel oils are included.

▲ For more details circle NED-967 D3 on enclosed inquiry slip ▲

Automatic Transfer Machines

Motch & Merryweather Machinery Co.—Most production per square foot is theme of 4-page illustrated bulletin 3000 which gives details of typical units in line of automatic transfer machines for unitized machining and cut-off operations.

▲ For more details circle NED-968 D3 on enclosed inquiry slip ▲

Blast Cleaning Machine

Pangborn Corp.—Featured attraction of 12-page illustrated bulletin 223 is the Blastmaster Rotoblast, and airless blast cleaning machine, offered in 6 and 12 cu ft models for batch blasting castings, forgings and heat treated parts. Bulletin shows how production savings can be realized. Eight construction features, including an abrasive tight door, are outlined.

▲ For more details circle NED-969 D3 on enclosed inquiry slip ▲

Cast Steel Valves

Edward Valves, Inc.—56-page illustrated catalog No. 12-C gives complete information on globe, angle and check valves made of cast steel in 300, 600, 900 and 1500-lb pressure classes. Construction features, dimensions and weights are included, along with much other data and specifications.

▲ For more details circle NED-970 D3 on enclosed inquiry slip ▲

Fuses & Fuse Data

General Electric Co., Construction Materials Div.—If it pertains to fuses, chances are it's in this booklet, 24-page illustrated catalog 16-132. Complete line of G-E fuses, including time-delay, one-time, copper link and plug fuses and fuse holders are covered. Technical data section tells how a fuse operates, gives maintenance hints, presents section of Electrical Code pertaining to fuses and gives dimensions.

▲ For more details circle NED-971 D3 on enclosed inquiry slip ▲

Molybdenum Lubricant

Imperial Oil & Grease Co.—Petroleum is the vehicle instead of the primary lubricating agent in Molub-Alloy, a lubricant which employs homogenized micro-sized particles of self-lubricating metallic solids, one of which is molybdenum disulphide. As described in illustrated 8-page bulletin, the lubricant is made in a range of types and weights for many diversified applications.

▲ For more details circle NED-972 D3 on enclosed inquiry slip ▲

Electrical Instruments

Hickok Electrical Instrument Co.—Complete details on the Hickok line of electrical instruments, including panel, aircraft and portable meters, are found in 40-page illustrated catalog No. 26 and supplement. Many are water-, moisture-, and steam-proof; some are flush, semiflush or panel mounting; and others are square and round. Watt, volt, ampere, millivolt, milliampere and frequency types, among others, are listed and their prices given.

▲ For more details circle NED-973 D3 on enclosed inquiry slip ▲

Transformer Laminations

Allegheny Ludlum Steel Corp.—Fifth edition of transformer laminations catalog includes technical information and full size drawings of all available standard shapes. Each is offered in various magnetic materials and thicknesses. Weight table to assist in ordering and company facilities description are included.

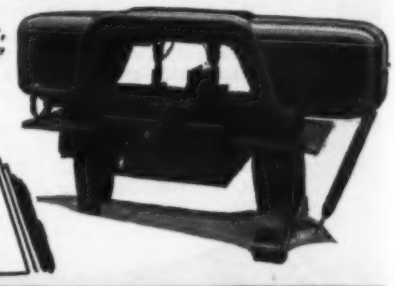
▲ For more details circle NED-974 D3 on enclosed inquiry slip ▲

As an added safety feature, all Model "J"

JOHNSON METAL CUT-OFF BAND SAWS

come equipped with a BLADE GUARD. This guard is located between the Left Frame and Guides. It covers the exposed cutting portion of the blade as a means of protection. The Guard can be readily removed to change blade. Model J (illustrated), heavy, sturdy, cuts 10" rounds, 18" flats.

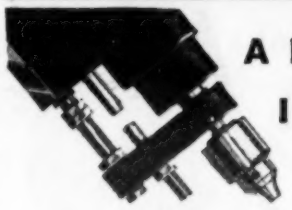
Also Model B, lighter, portable, rigid. Cuts 5" rounds, 10" flats.



Write for CATALOG!

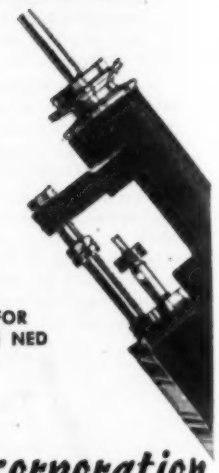
JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

▲ For more details circle NED-975 D3 on enclosed inquiry slip ▲



A NEW CONCEPT IN AIR-POWERED DRILL UNITS FROM CHUCK TO SPINDLE

The Alkon Air Powered, Hydraulically controlled Drill Unit is setting new standards for low cost—high speed drilling. Small over all dimensions allow multiple drilling at extremely close centers. Accurately machined drill base facilitates simple mounting procedure on a drill press stand or machine table. Hydraulic and air systems provide speed to the work, controlled drilling through the work and rapid return. All drilling factors are fully controllable. Investigate this precision built, high capacity drill unit today!



WRITE FOR BROCHURE NED

ALKON products corporation
698 EAST 142nd ST. • NEW YORK 54, N. Y.

▲ For more details circle NED-976 D3 on enclosed inquiry slip ▲

For **SPECIFIED PERFORMANCE**
Specify **JELLIFF RESISTANCE WIRE**

A Wide Range of Alloys . . .
A Wide Range of Experience . . .
Complete Control of Manufacture . . .

make JELLIFF the ideal source of Resistance Wire to assure your Product's

PERFORMANCE ACCORDING TO SPECS

Among the Products that can benefit from the PLUS-PERFORMANCE of

JELLIFF RESISTANCE WIRE are

precision resistors — rheostats — thermocouples — relays — bridges ohmmeters — high-temperature furnaces.

Detailed Enquiries Welcomed. Address Dept. 11

THE C. O. JELLIFF MANUFACTURING CORPORATION SOUTHPORT, CONN.

▲ For more details circle NED-977 D3 on enclosed inquiry slip ▲

"Lighting troubles eliminated,

thanks to the LUSTRA MAN,"

(says Philadelphia Div., Solar Steel Corp.)

Mr. Lewis Carley, Plant Supt., reports, "In this plant, ordinary incandescents burned out in 6 or 7 weeks. Since installing Lustra Shockproof Lamps we have had no failures in 6 months."

Your local Lustra Man can solve your lighting problems, too . . . and save you money at the same time. Send for literature giving the whole Lustra story. **Lustra Corporation, Dept. R-4, 36 Washington Street, Brooklyn 1, N. Y.**

Lustra AMERICA'S DATED LAMPS

DOUBLE DUTY REFLECTOR LAMPS, INCANDESCENT LAMPS, FLUORESCENT TUBES, SPOTLITES AND FLOODLITES, RUGGED DUTY LAMPS, FLUORESCENT FIXTURES AND STARTERS

▲ For more details circle **NED-978 D3** on enclosed inquiry slip ▲

NOW A NEW LINE OF Automatic Skylift Trucks AT NEW LOW PRICES

COMPARE THESE ADVANTAGES

FEATURE	BENEFIT
Only Automatic Skylifts have Silicone insulated motors	Max. protection against motor damage from overheating
Ball bearing mounted carriage and upright rollers	Friction-free lift, less wear —minimum current draw
Full magnetic control with plug-proof protection	Safety—lowest maintenance
Spur and Hypoid gear drive fully enclosed in oil bath	Maximum efficiency under all load conditions
Patented duolift rams with leakage return	Exclusive! Protects ram plunger from dirt, damage
Highest lift speed of any electric truck	Does more work—faster
Heavy section rolled manganese alloy steel uprights	Better wearing quality, proper flange strength
Hydraulic Safety Fuse	Locks load in position if line ruptures
Greatest accessibility for maintenance	Minimum down time, lowest maintenance costs

ONLY AUTOMATIC HAS THEM ALL

Automatic

LARGEST EXCLUSIVE BUILDER OF ELECTRICAL INDUSTRIAL TRUCKS

Before you buy any lift truck, get the complete money-saving facts on the amazing materials handling savings these new Automatic "Standard" Skylifts will bring to *your business!*

2000 lb. model, only $3575*

F.O.B. Chicago *Nosslift Model PRICE IN U.S.A.

61 West 87th Street, Dept. D-3 Chicago 20, Illinois

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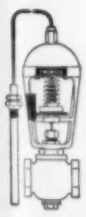
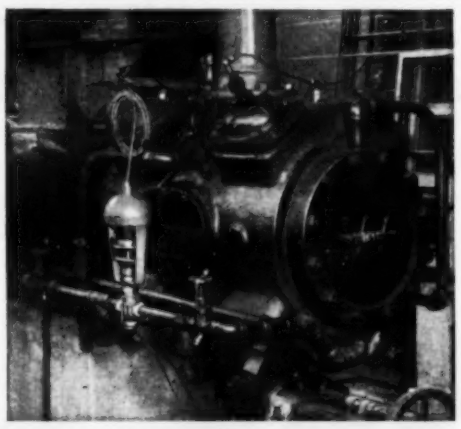




This TRERICE Self-Operating Controller

—Paid for Itself in Sixty Days!

. . . installed in a Detroit office building.

Two small air compressors, cooled by ¾" water lines, operate seven days a week -- one at night, the other during the day. Meters provide a close check as to the amount of water used. After installing a Trerice self-operating temperature controller, a check showed a saving of over 48,000 cubic feet of water in two months (as compared to figures for the previous year). Savings amounted to $90.91 — and the Trerice instrument cost but $87.30.

You, too, can enjoy real savings like these. While this is a cold water application, it would be equally effective to control steam to hot water tanks, pasteurizers, pre-heaters, storage rooms, vats, plating tanks, cookers, feed-water heaters, water jackets, etc.

Write for information today!

H. O. TRERICE CO. *Since 1923*

Manufacturers of TEMPERATURE INSTRUMENTS

1424 W. LAFAYETTE BLVD. DETROIT 16, MICHIGAN

Branches in principal cities

▲ For more details circle **NED-980 D3** on enclosed inquiry slip ▲

New Processes & Materials

ROSIN CORE SOLDER
flux active before solder melts

Extra fast soldering is possible with Divco X-25 rosin core solder because flux becomes active even before solder is completely molten. Thus, solder takes to base metal immediately. No cold jointing is experienced, and a sure bond is quickly achieved at low temperature. Noncorrosiveness and high dielectric properties are equal to pure rosin flux. Solder is available in any size or quantity and conforms to all armed forces and Federal specifications for noncorrosive qualities and solder analysis. Made by **Division Lead Co.,** Dept. P-12, 836 W. Kinzie St., Chicago 22, Ill.

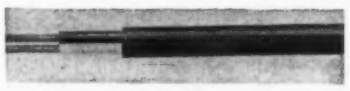
▲ For more details circle **NED-981 D3** on enclosed inquiry slip ▲

STAINLESS STEEL SOLDER
applies with iron at 430° F

Containing neither lead, zinc nor cadmium, No. 430 silver-bearing stainless steel solder is applicable with a soldering iron or torch at 430° F. It can be used in wide variety of work, particularly on steel, stainless, copper and nickel alloys. Properties on interconnecting of these metals are 10,000 to 28,000 psi tensile strength, 10,000 to 15,000 psi shear and elongation in 2 in. of 10 to 28 per cent. Deposit color matches stainless steel and remains stable. It is nontoxic and is not brittle. Movement of plastic joint does not effect solidus strength. Solder is distributed in 1/16, 3/32 and 1/8-in. wire on 1-lb spools and in 5-lb ingots. Made by **All-State Welding Alloys Co.,** 249 Ferrisden Ave., White Plains, N. Y.

▲ For more details circle **NED-982 D3** on enclosed inquiry slip ▲

POLE & BRACKET CABLE
is all plastic-insulated



Now available for street-lighting service is plastic-insulated pole and bracket cable rated at 600 v between conductors and 6000 v from conductor to ground. Other voltage ratings are available on request. Construction consists of two parallel flexible stranded conductors, each insulated with Densheath PVC, one black and one white, and jacketed in oval-shaped black polyethylene. Sizes furnished are No. 10 Awg, 19 strands, 0.43 x 0.64 in.; No. 8 Awg, 37 strands, 0.46 x 0.71 in.; and No. 6 Awg, 37 strands, 0.50 x 0.81 in. Conductors should be protected from heat at lamp terminals with suitable heat barriers and conductor separators. Made by **Anaconda Wire & Cable Co.,** 25 Broadway, New York 4, N. Y.

▲ For more details circle **NED-983 D3** on enclosed inquiry slip ▲

INDUSTRIAL ALUMINUM COATING
provides protection from acids, alkalies and corrosive atmospheres

Applicable with standard spray gun equipment and pressures, Roylac aluminum can be applied to products or parts, or even wire fencing as shown, with overspray so controlled that objects 4 ft or more away are not marred or damaged. Vehicles and solvents used causes coating to dry in traveling 4 ft, and the residue which falls is a dry, cottony, nonadhering powder.

Finish is tightly bonded, corrosion resistant and bright. It is particularly effective in providing protection from acid or alkali fumes, salt or moist air, and most other commonly encountered corrosive atmospheres. Material is plasticized to give a film of good flexibility and bonding tack for sealing wood, concrete and other porous surfaces. It is applicable also to galvanized, zinc, aluminum, magnesium, steel and other metals. Coverage is 600 to 800 sq ft per gallon. It dries tack-free in 12 minutes, and can also be applied with a brush. Made by **Royston Laboratories, Inc.,** P. O. Box 112-A, Blawnox, Pa.

▲ For more details circle **NED-984 D3** on enclosed inquiry slip ▲

Now! a really SAFE high pressure steam hose

Quaker IRONSIDES STEAM HOSE

Safer! Glass for insulation, steel wire for protection. Withstands high pressures —saturated steam to 200 lbs., superheated steam to 388° F.

Stronger! Tremendous strength is obtained by the combination of steel wire braid and glass cord. Firmly bonded, tube will not separate or collapse.

Easier Handling! Lighter weight, greater flexibility assure greater handling ease. Kinkproof!

A QUAKER *exclusive!* Real insurance against the hazards of bursting. An ideal combination of high insulation and toughness. COSTS NO MORE than wrapped fabric hose. Carried in all branch stocks. Call or write for full details today.

QUAKER RUBBER CORPORATION
DIVISION OF H. K. PORTER COMPANY, INC.
OF PITTSBURGH
Dept. D, Philadelphia 24, Pa. Branches in Principal Cities

▲ For more details circle **NED-985 D3** on enclosed inquiry slip ▲

Mini-Brushes . . .

CAN CURE

PRODUCTION HEADACHES

● You are looking at a twisted-in-wire brush most brush manufacturers will tell you can't be made. It is only .065" in diameter and extremely accurate to size. A maker of hydraulic equipment uses it to deburr and clean out 1/16" holes—and to minimize his production headaches.

Mini-Brushes, in decimal sizes under ⅛", and made only by Mill-Rose on special order, are cutting costs today in many plants—removing drilling, reaming and milling burs, cleaning out drilled and tapped holes ready for assembly, removing finishes, sludge, oils and chips from small threaded holes and removing flash rubber and other materials from metal bonded parts.

Mill-Rose twisted-in-wire brushes with steel, bronze, stainless, bristle or nylon fill are made in sizes down to .065" diameter—accurate to size—and sturdy. If you think these brushes can simplify a production operation in your plant, outline your problem and let us apply our brush know-how. Write today.

HIGH PRECISION INDUSTRIAL BRUSHES TWISTED IN WIRE

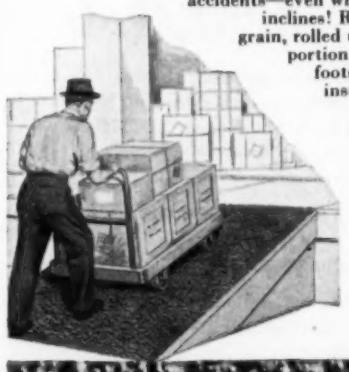
The MILL-ROSE *Company* 1985 EAST 59th STREET CLEVELAND 3, OHIO

▲ For more details circle **NED-986 D3** on enclosed inquiry slip ▲

THIS NON-SLIP FLOOR PLATE PAYS FOR ITSELF IN LOWER INSURANCE RATES!

DOWN go accident rates *and* insurance premiums when you install A.W. ALGRIP Abrasive Rolled Steel Floor Plate. In plant after plant, ALGRIP has ended slipping accidents—even when wet or oily—even on steep inclines! Rough, tough "grinding-wheel" grain, rolled uniformly into ALGRIP's upper portion, puts non-skid safety in every footstep. And resultant savings on insurance premiums pay for your ALGRIP installation.

Learn the full story of *savings from safety* today. Send for the facts about tough, fire-and-breakage-resistant, non-slip ALGRIP Safety Floor Plate. The handy coupon brings you our new Booklet on accident prevention.



A.W.

A.W. ALGRIP *Abrasive Rolled Steel Floor Plate*

ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

I want to know more about savings from safety. Send me your ALGRIP Booklet AL-6.

*Name*_____
*Company*_____
*Address*_____
*City*_____ *Zone*_____ *State*_____

▲ For more details circle **NED-987 D3** on enclosed inquiry slip ▲

Save Installation Time!

SPECIFY AN ALLIS-CHALMERS COMBINATION STARTER

WHEN YOU NEED both a magnetic starter and the protection of a safety switch, a neat installation can be made quickly with an Allis-Chalmers circuit breaker type combination starter. Starter and switch are factory assembled and wired in a single enclosure to save you installation time and space.

You get a starter that has long-lasting contacts, non-carbonizing arc chambers and easily accessible parts. The circuit breaker gives short circuit protection . . . serves as a disconnect switch.

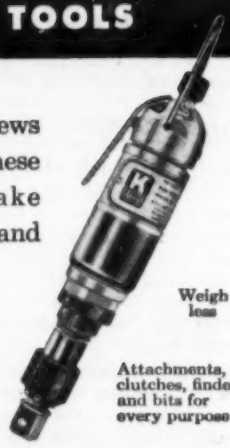
Combination starters are available in sizes 0 through 5 for motors from fractional to 200 hp, 110-550 volts.

Remember, there is an Allis-Chalmers starter for every motor need. All are designed and constructed for long life, easy inspection, speedy installation. Bulletin 14B7132 describes manual, magnetic, combination, and reversing starters for 110-550 volt motors. Contact your nearby A-C representative, or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-3715

ALLIS-CHALMERS

For more details circle NED-988 D3 on enclosed inquiry slip

Save Time—Speed Assembly WITH **KELLER AIR TOOLS**



Wherever there are screws to drive or nuts to set, these lightweight tools make work easier and faster, and reduce labor costs.

Consume less air

Reduce operator fatigue

Interchangeable parts

Weigh less

Attachments, clutches, finders, and bits for every purpose

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company
GRAND HAVEN, MICHIGAN

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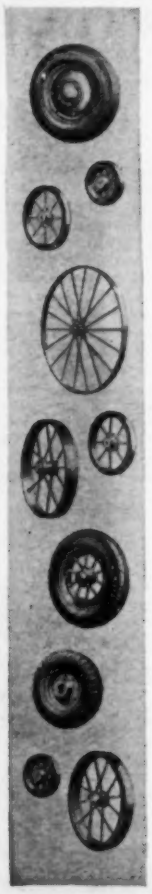


TRUCKS AND TRAILERS MOVE FASTER, EASIER ON NEW WHEELS BY

ELECTRIC

Modernize baggage-trucks, industrial trailers, floor trucks, mail carts and other portable equipment with new ELECTRIC wheels **for faster, easier handling.** There is an ELECTRIC wheel for every job.

Our 65 years of engineering "know-how" assures you of top performance from ELECTRIC equipment.

ELECTRIC wheels are furnished with or without roller bearings to fit your own axles or complete with axles—steel tires, molded-on-tires, or pneumatic tires. All types are available in a full range of sizes.

Our experienced engineers are always at your service.

WRITE FOR COMPLETE INFORMATION

ELECTRIC WHEEL CO.
2818 CHERRY · QUINCY, ILLINOIS

For more details circle NED-990 D3 on enclosed inquiry slip

New Literature & Catalogs

Heat Exchange Equipment

Manning & Lewis Engineering Co.—Coil, straight tube and pipe line types of stainless steel units for condensing, heating and cooling are featured in 4-page illustrated bulletin 800. Units with up to 50 sq ft of heat exchange surface are available for use in chemical, pharmaceutical, gas, solvent, acid, caustic, oil, processing, refining and blowdown service.

For more details circle NED-991 D3 on enclosed inquiry slip

Solenoids

PSP Engineering Co.—"Aircraft Quality Solenoids" is 48-page illustrated engineering manual that contains engineering drawings and charts actuating force vs. stroke and holding force vs. voltage on line of solenoids which includes single and two coil dc-pull and dc-push units as well as special models.

For more details circle NED-992 D3 on enclosed inquiry slip

Air & Hydraulic Controls

Ledeen Mfg. Co.—Operating and circuit diagrams, dimensions, weights and other data on disk type Ledeen valves for operating and controlling air and hydraulic cylinders and air motors are contained in 16-page illustrated bulletin 1000. Valves are offered in hand, foot, power and solenoid operated models.

For more details circle NED-993 D3 on enclosed inquiry slip

Conveyors

Standard Conveyor Co.—16-page illustrated bulletin 68 shows conveyor installations and pneumatic tube systems in munition plants, steel and brass foundries, airplane plants, automobile factories and machine shops. Types and sizes for practically every materials handling purpose are covered.

For more details circle NED-994 D3 on enclosed inquiry slip

Speed Reducers

Universal Gear Corp.—Heliocentric helical Universal speed reducers are detailed in 8-page illustrated section 1A of catalog 600. Speed reducers range in size from ⅛ to 6000 hp in ratios of 3:1 to 1,000,000:1. Design and application information is included.

For more details circle NED-995 D3 on enclosed inquiry slip

Fluorescent Lighting Guidance

Westinghouse Electric Corp.—24-page pocket catalog of fluorescent luminaires for industrial and commercial applications contains diagrams and pictures covering fixtures and where they are best applied. Available models, features of each and dimensions are included. Ask for booklet B-5799.

For more details circle NED-996 D3 on enclosed inquiry slip

Hole Punching Units

Wales-Strippit Corp.—32-page illustrated catalog BL deals with hole punching units for up to ⅛-in. thick mild steel and up to 2½-in. diameter holes. These adjustable units are quickly set up to desired hole arrangement on stamping presses and press brakes.

For more details circle NED-997 D3 on enclosed inquiry slip

Steel Detachable Chain

Chain Belt Co.—Of handbook size, bulletin 52-52 is of interest to all who buy or maintain steel detachable chain or design equipment using this chain. It explains in its 44 pages chain manufacture step-by-step; describes and illustrates plain chain and attachments; and gives dimensions, weights, prices, strengths, lengths and much other data.

For more details circle NED-998 D3 on enclosed inquiry slip

Wet Blasting Equipment

Cro-Plate Co.—Twenty-nine ways in which costs of deburring, descaling, microinch surfacing and general metal finishing operations can be reduced through use of pressure blast high velocity wet blasting equipment and the correct abrasive are outlined in this packet of technical literature. It has a list of the applications and descriptions of the equipment used.

For more details circle NED-999 D3 on enclosed inquiry slip

Polaroid Land Camera

Polaroid Corp.—How the Pathfinder Polaroid land camera with its technical features is extending the scope of 60-second photography in a variety of businesses is shown in 16-page booklet F 1209. Pages alternate technical description of lens, shutter, range-finder and other mechanisms with sample pictures showing kind of shots camera can turn out.

For more details circle NED-1000 D3 on enclosed inquiry slip

RITE-HITE

Presents A Self-Contained

Adjustable Loading Dock

The new model 72-U was designed to meet the need for a completely self-contained unit. It can be anchored in front of existing dock facilities or recessed within your present dock.

CHECK THESE FEATURES

- *Precise Carrier to Dock Alignment*
- *Safety Curbs and Treads*
- *Finger-Tip Adjustment*
- *One-man Operation*
- √ *No Fluid or Electric Controls*
- √ *No Lubrication Necessary*
- √ *No Piping*
- √ *No Motors*

Rite-Hite's Also Available in Other Standard Models

• *Write for literature*

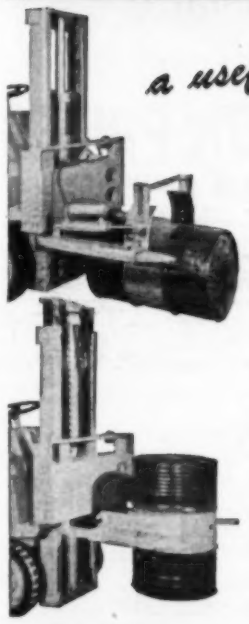
RITE-HITE Keeps Traffic on the GO!

LOOMIS MACHINE CO. RITE-HITE DIVISION

Dept. 14, CLARE, MICHIGAN

For more details circle NED-1001 D3 on enclosed inquiry slip

NEW! BAKER HYDRAULIC DRUM UP-ENDER



a useful attachment for

BAKER FORK TRUCKS

With this attachment a fork truck can pick up and transport drums or other cylindrical objects either vertically or horizontally and rotate them 90°, for horizontal or vertical stacking. It can also tilt them forward 45° beyond horizontal for emptying at any height within the truck's lifting range. All operations are controlled by the operator from the driver's position. Attachment is quickly demounted by removing two lock pins, disconnecting a "snap-on" hose coupling and sliding the complete assembly off the forks.

For application on Baker 2000, 3000 and 4000 pound capacity fork trucks.

Baker industrial trucks

write for Bulletin 1350-4.

THE BAKER-RAULANG COMPANY
1226 W. 80th STREET • CLEVELAND 2, OHIO

BAKER-LULL Corp., *Subsidiary*, Minneapolis, Minn.
Material Handling and Construction Equipment

For more details circle NED-1002 D3 on enclosed inquiry slip

THE **'BIG 3'**

Ask your Burndy Distributor

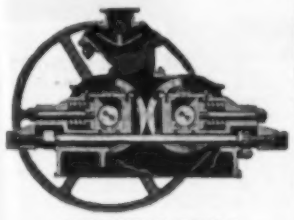
BURNDY
NORWALK · CONNECTICUT

For more details circle NED-1003 D3 on enclosed inquiry slip

STURTEVANT EQUIPMENT INCREASES PRODUCTION AND CUTS COSTS

RING-ROLL MILLS
for medium and fine reduction 10 to 200 mesh, hard or soft materials. Very durable, small power. Operate in closed circuit with Screen or Air Separator. Open door accessibility. Many sizes. No scrapers, plows, or pushers.

ROTARY FINE CRUSHERS
for intermediate and fine reduction down to ¼". Open door accessibility. Soft or moderately hard materials. Efficient granulators. Excellent preliminary Crushers preceding Pulverizers.



CRUSHING ROLLS
for granulation, coarse or fine, hard or soft materials. Automatic adjustments. Crushing shocks balanced. For dry or wet reduction. Sizes 8x5 to 38x20. The standard for abrasives.

MOTO-VIBRO SCREENS
screen anything screenable. Classified vibrations. Unit construction — any capacity. Open door accessibility. Open and closed models with or without feeders. Many types and sizes — range of work ½ inch to 60 mesh.

Sturtevant Mill Company, 114 Clayton St., Boston 22, Mass.

For more details circle NED-1004 D3 on enclosed inquiry slip

THE *Workhorse* OF SMALL GRINDERS

Aro Short Grinder Model 7149, 17,000 R.P.M.

ARO does it *faster . . .* at *lower cost!*
That's why Rohr Aircraft at San Diego —and hundreds of other progressive plants today — prefer ARO. Complete line grinders for jet engines . . . also heavy duty vertical and horizontal grinders of all types. Write for new catalog 60. The Aro Equipment Corp., Bryan, Ohio.
Aro Equipment of Canada, Ltd., Toronto, Ont.

ARO AIR TOOLS

Also . . LUBRICATING EQUIPMENT . . HYDRAULIC EQUIPMENT . . AIRCRAFT PRODUCTS . . GREASE FITTINGS

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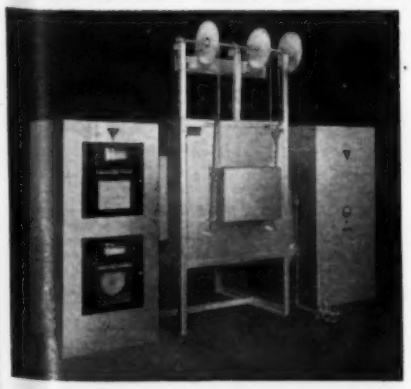
New—High Temperature Heat Treating PERECO *Electric* FURNACE



A General Purpose Furnace

For All Temperatures Up To 2500° F.

MODEL FG-430

Standard or Special Furnaces for Temperatures from 450° to 5000° F.

Clean electric heat for the full range of heat-treating needs, with a roomy work chamber of 14" w. x 24" d. x 12" h. Gas tight case. Wedge-fit counterbalanced foot-operated door. Full range of controls in handy reach on separate panels.

Write Today Telling Us of Your Needs

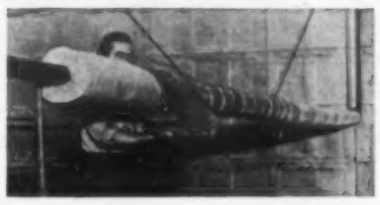
PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, Ohio

PERENY EQUIPMENT COLUMBUS OHIO

For more details circle NED-1006 D3 on enclosed inquiry slip

New Processes & Materials

PIPE INSULATION adaptable for hot or cold pipes



Available in 100-ft rolls, 36 in. wide and ¾-in. thick, Aerowrap wrap-around pipe insulation for hot or cold pipes of all sizes is easy to apply. It is flexible, can be built up to any thickness and can be cut with shears, knife or paper cutter. Temperature range is from below zero to 600° F. This soft, resilient roll type material is held in place with Fiberglas tying cord, adhesive or staples. It can then be covered with a jacket of aluminum, black roofing felt, asbestos paper-faced felt or rolled galvanized sheet metal. Made by **Owens-Corning Fiberglas Corp.**, Nicholas Bldg., Toledo 1, O.

For more details circle NED-1007 D3 on enclosed inquiry slip

ELECTRICAL SILICONE VARNISH retains dielectric strength well

Used primarily for coating glass cloth and sleeving and for bonding mica-glass combinations, silicone electrical insulating varnish 994 has high heat resistance. In most applications, curing varnish at 250° C for 1 hour will produce flexible film that has exceptional heat stability and is water repellent. At 250° C, varnish coatings have flex life of over 1000 hours and craze life of over 3000 hours. At 300° C, flex life is greater than 500 hours and craze life is over 800 hours. Over 65 per cent of product's initial dielectric strength of between 1600 to 1900 v per mil is retained after 2000 hours at 250° C. Made by **Dow Corning Corp.**, Dept. IS, P. O. Box 592, Midland, Mich.

For more details circle NED-1008 D3 on enclosed inquiry slip

FLEXIBLE ELECTRICAL CONDUIT is UL approved for wet locations

Underwriters' Laboratories approved for use in wet locations, type UA Sealtite flexible electrical conduit features extruded synthetic covering over flexible metal core to protect wiring against moisture, oil, dirt, chemicals and corrosive fumes. Conduit is spirally wound, interlocked zinc-plated steel strip with copper bonding conductor wound spirally in space between each convolution on inside of conduit. It bends easily and can be cut to desired lengths. In both indoor and outdoor applications of this easy-to-install conduit, movement, vibration and misalignment are minimized. Conduit is furnished in long lengths in nominal electrical ID sizes ⅜ to 1¼ in. inclusive. Made by **American Brass Co.**, American Metal Hose Branch, Dept. SN, Waterbury 20, Conn.

For more details circle NED-1009 D3 on enclosed inquiry slip

HEAT-RESISTANT HARD RUBBER handles hot corrosive solutions

Rigidity and heat and chemical resistance are greater in Ace Temperon, a nitrile synthetic hard rubber (Buna-N), than in hitherto available nitrile rubbers. Product is furnished in form of pipe and fittings, molded parts, sheet, rod and tubes and in forms for making tanks or large fittings by forming sheets still in the soft state prior to vulcanization. It resists oils; aliphatic hydrocarbons; solvents such as ether, benzene, carbon tetrachloride, ethyl acetate and benzaldehyde; and other chemicals which attack natural rubbers and plastics. Thermosetting material is highly dielectric, has tensile strength of 7500 psi and heat distortion temperature of 260-275° F. Rubber can be altered in different ways to give the correct physical, chemical and electrical properties for specific applications. Machineability to smooth glossy surface is possible. Developed by **American Hard Rubber Co.**, Dept. NED, 93 Worth St., New York 13, N. Y.

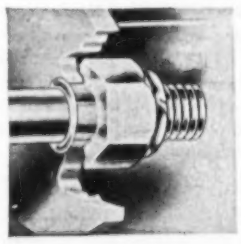
For more details circle NED-1010 D3 on enclosed inquiry slip

PRE-TESTED SUPER-STRENGTH FOR *Trouble-Free* PRODUCTION

For more details circle NED-1011 D3 on enclosed inquiry slip

clinch type ELASTIC STOP nuts

for attachment to thin section metal components



- Permanently installed by simple clinching or swaging.
- Self-locking and vibration-proof—because all ESNA Clinch Nuts have the famous red elastic locking collar.
- Permit precise screw adjustments; prevent loosening of component parts.

- **WRITE for design information on Clinch Nuts and other special and standard ESNA fasteners. Address Dept. N35-437.**

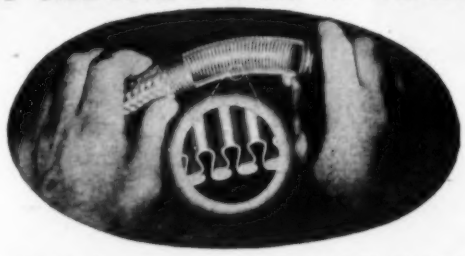
ESNA

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, N. J.

DESIGN HEADQUARTERS FOR SELF-LOCKING FASTENERS

For more details circle NED-1012 D3 on enclosed inquiry slip

WHICH OF 1001 USES FOR THIS METAL HOSE IS YOURS?



Are you overlooking an opportunity to improve the performance, life, or salability of your equipment with metal hose?

Yours may be one of the hundreds of undiscovered uses for metal hose—especially for flexible, pressure-tight TITEFLEX® Metal Hose.

The special construction of Titeflex, and the variety of alloys, sizes, and fitted lengths enable you to combat severe temperature, pressure, and corrosion conditions where a flexible connection is necessary.

For maximum results, ask us for design suggestions and help in hose selection.

Titeflex Let Our Family of Products Help Yours

MAIL COUPON TODAY

TITEFLEX, INC.
507 Frelinghuysen Ave., Newark 5, N.J.
Please send me information about Titeflex Metal Hose and its applications.

NAME _____
TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE ____ STATE ____

For more details circle NED-1013 D3 on enclosed inquiry slip

THESE NEW GUARDIAN RELAYS PROVIDE MORE POWER FOR ANY COMMUNICATIONS SYSTEM

Power increasing—space and weight saving—Guardian Series 595-P and 695-P Communications Relays feature: (1) New, improved field piece with enlarged end adjacent to armature which reduces magnetic reluctance of hinge gap; (2) Armature pivots on stainless steel pin bearing, resulting in minimum friction and maximum utilization of power; (3) Magnetic circuit efficiency assured by use of correct combination of winding to core size for sensitive or power types.

Series 595-P carries up to 4 P.D.T., weighs (D.P.D.T.) 2.5 oz. Series 695-P carries up to 6 P.D.T., weighs (D.P.D.T.) 3.5 oz. Both units available *hermetically sealed* to MIL-R-6106. Write.

Series 595 D. C.

GUARDIAN ELECTRIC
1626-D W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

For more details circle NED-1014 D3 on enclosed inquiry slip

NEW G-E RENEWABLE FUSE
improved 4 ways

Knife blade
Ferrule

Check these important features:

1. Silver-plated electrical contact areas keep the new G-E fuse from overheating because of copper oxidation. 2. New link design gives accurate protection, plus freedom from blows caused by harmless momentary overloads. 3. Only two parts to remove when replacing links. 4. Solid brass fittings and thick fiber casing make the new G-E fuse exceptionally rugged.

Made in ferrule and knife-blade ratings—listed by Underwriters' Laboratories, Inc. It will pay you to get further information—see your G-E Construction Materials distributor, or, write to Section D84-461, Construction Materials Division, General Electric Company, Bridgeport 2, Conn.

You can put your confidence in—

GENERAL ELECTRIC

For more details circle NED-1015 D3 on enclosed inquiry slip

Emboss Your Own Metal Tags
At Low Cost

Get a Completely Embossed Tag Every 1½ Seconds!

You can emboss up to 20 characters at a time on 50 metal tags per minute with this efficient, easily-operated Pannier "Master Marker." Characters are carried on interchangeable slides; positioned by hand wheels on side of machine head. Die slides are engraved to specification, including standard code characters of the Concrete Reinforcing Steel Institute. Tags are supplied in reels; mount on machine for safe, convenient feeding. Machine is available with foot or power operation.

GET COMPLETE DATA FREE
Complete data on this and other efficient Pannier "Master Marker" Embossing Machines is available on request. Ask for Bulletin D-9.

OFFICES:
Pittsburgh, Pa. Chicago, Ill. Los Angeles, Calif.
Youngstown, O. Philadelphia, Pa.

THE PANNIER CORPORATION
301 Pannier Bldg.
Pittsburgh 12, Pa.
Export Department: Bessemer Bldg., Pittsburgh, Pa.

For more details circle NED-1016 D3 on enclosed inquiry slip

New Literature & Catalogs

Precision Gages

Foster Supplies Co.—Two illustrated folders deal with up to 48-in. vernier calipers and height gages and with 2 to 8-in. precision squares. Extremely accurate and machine engraved, gages and calipers are designed for inspection, set-up and lay-out work. Squares have beveled edges, ground side faces, ground and lapped working faces and are hardened.

For more details circle NED-1017 D3 on enclosed inquiry slip

Diesel Data

Harnischfeger Corp., P & H Diesel Div.—"What You Should Know About Diesel Engines" is a simply-written, nontechnical primer on diesel engine operation and development. Generous use of cartoons, sketches and illustrations in this 28-page booklet serves to clarify all points covered in text. This ABC treatment shows economies that are possible with diesel engines to provide power for stationary and mobile equipment of all types.

For more details circle NED-1018 D3 on enclosed inquiry slip

Jig & Fixture Details

Harco Engineering—By specifying and using the standard jig and fixture details described and illustrated in 4-page folder, savings in designing time, manpower, production time and, of course, money can be realized. Sketches and specifications for buttons, keys, bolts, washers, nuts, studs and hand knobs are given.

For more details circle NED-1019 D3 on enclosed inquiry slip

Coal Tar Protective Coating

Tapecoat Co.—How corrosion problems in gas and oil fields, transportation and communication, water and sewage, chemical and industrial applications can be solved by application of Tapecoat, a coal tar protective coating in tape form is outlined in 8-page illustrated bulletin. How and where coal tar protection can be used to advantage is shown in case histories.

For more details circle NED-1020 D3 on enclosed inquiry slip

Industrial Pipe

Robinson Clay Product Co.—Screw-Seal industrial pipe which employs phenolic collars and cast-on threads of Plastisol to make a tight acid-resistant joint are shown and explained in illustrated folder. Joints can be deflected 6 degrees without leakage. Pipe is used indoors or outside.

For more details circle NED-1021 D3 on enclosed inquiry slip

Quenching Oil Filters

Industrial Filtration Co.—How Delpark industrial filters for quenching oil application help retain the original flash and viscosity points, as well as eliminate excessive oxidation and loss of the oil is illustrated in 4-page bulletin. Literature also discusses the reasons for quenching oil failure.

For more details circle NED-1022 D3 on enclosed inquiry slip

Air-Gas Proportional Mixers

Hauck Mfg. Co.—Simultaneous controlling and accurate proportioning of air and gas with a single control valve for manual or automatic operation is described and illustrated in 12 page, well-illustrated catalog 805A. Mixer capacity tables are given for five gas types and eight air pressure ratings. Also included are typical piping and manifolding layouts and technical data.

For more details circle NED-1023 D3 on enclosed inquiry slip

Steel Plate Fabrication

Biggs Boiler Works Co.—Exceptionally heavy gages and wide widths of stainless, carbon-moly, coated, clad or mild steels can be fabricated, welded or riveted to ASME specifications by this company. Its facilities and examples of lined chemical tanks, pressure vessels, rotary kilns, driers, cable drums and other products made in its shop are shown in 6-page bulletin 531 "Built by Biggs."

For more details circle NED-1024 D3 on enclosed inquiry slip

Pressure & Temperature Regulators

Foster Engineering Co.—Selection of the proper type and size of pressure regulator, temperature regulator or pump governor to do a specific job is simplified by 36-page illustrated brochure "How to Select Foster Regulators." Written in nontechnical language, booklet features type selection charts; steam, gas and water capacity tables; installation suggestions; and other data.

For more details circle NED-1025 D3 on enclosed inquiry slip

SWECO SEPARATORS
... are Engineered for Every Screening Need

- Efficient Single or Multiple Deck Screening
- Proved Greater Production Capacities
- From Coarse to as fine as 325 Mesh
- Wet or Dry Screening
- Low Cost Operation
- Unit Completely Self Contained with only Three Moving Parts
- Readily Adjustable Horizontal and Vertical Motion
- Clamp Ring Insures Rapid Screen Cloth Changes
- No Special Foundation, Supports or Base Required for Instant Production
- Production Separation with Laboratory Accuracy

Both Standard and Custom-Engineered Models Available

Write now for new 8-page catalog

SWECO SEPARATOR DIVISION
SOUTHWESTERN ENGINEERING CO.
4800 Santa Fe Ave., Los Angeles 58, Calif.

For more details circle NED-1026 D3 on enclosed inquiry slip

Design Engineers' Book of the Year!

Yours for the asking! Get all the engineering data on PITCHLIGN design and performance. See for yourself how PITCHLIGN Bearings combine a series of important design features never before achieved in small roller diameter bearings. The PITCHLIGN Catalog belongs in your file! Ask for Bulletin SF-966

Write Today!

PITCHLIGN
Trade Mark
ROLLER BEARINGS

RBC
ROLLER BEARING COMPANY OF AMERICA
SULLIVAN WAY • WEST TRENTON, N.J.

For more details circle NED-1027 D3 on enclosed inquiry slip

CHECK... AND COMPARE!

CHAMPION'S EXTRA FEATURES

DOMED PISTONS AND CYLINDERS • SPECIAL PLATE VALVES • STRAIGHT-LINE AIR FLOW • THIN, DEEP COOLING FINS • SPECIAL AFTER-COOLER • NO-LOAD STARTING • TWO MAIN BEARINGS • SIMPLE MAINTENANCE

aero-dynamic design for...

54 MODELS
- ¼ hp to 10 hp units
- horizontal or upright
- stationary or portable
- electric or gasoline

longer life . . . maximum pressure . . . minimum running costs

The air compressor system is a mighty important unit of plant equipment. Many vital production operations depend on it. Whether you plan to add additional compressor equipment — or replace obsoleted units, you should be sure that your new compressor will give you *endurance* PLUS *dependable performance* PLUS *economy*.

These qualities are determined by many things, principally by the materials, workmanship and design of the compressor—not by any single feature. That's why we ask that you *check* and compare the *Extra* CHAMPION *Features* before you make your choice. Check point-by-point and you can't help but pick—the "Champ" of compressors—a CHAMPION.

AIR HOSE REELS
The Hose Reel speeds up work, prevents accidents and saves on air and water hose replacements. May be mounted on ceiling, wall or floor.

WRITE TODAY FOR your FREE copy of the Champion catalog

CHAMPION PNEUMATIC MACHINERY CO.
837 No. Pleasant St. Princeton, Illinois
PRESSURE CLEANERS • AIR HOSE REELS • AIR ACCESSORIES

For more details circle NED-1028 D3 on enclosed inquiry slip

ALWAYS set up to Measure

RESISTANCE ☆ CAPACITANCE ☆ INDUCTANCE

This universal Bridge is completely self-contained with built-in standards and power sources. Portable, accurate, direct-reading, reliable and always ready to use, it measures these quantities rapidly and easily:

Resistance: 1 milliohm to 1 megohm
Capacitance: 1 micromicrofarad to 100 microfarads
Inductance: 1 microhenry to 100 henrys
Dissipation Factor: (R/X) from .002 to 1
Storage Factor: (X/R or Q) from .02 to 1000

Four internal dry cells are the d-c power source and drive a 1000-cycle hummer for a-c measurements. A zero-center galvanometer is used for d-c balance; terminals for external headset (not supplied with instrument) for a-c null detection.

Type 650-A Impedance Bridge $260.00

GENERAL RADIO Company 275 Massachusetts Ave. Cambridge 39, Mass.
90 West St. NEW YORK 6 920 South Michigan Ave. CHICAGO 5
1000 North Seward St. LOS ANGELES 38

▲ For more details circle **NED-1029 D3** on enclosed inquiry slip ▲

HIGH SPEED Precision GRINDING

with the **HIGH SPEED** *Diskette*

Something new! The Franklin Balmar DISKETTE for precision work in high speed ranges where ordinary electric tools do not reach. No-load spindle speed approximately 9000 RPM, operating speeds only slightly less. No need to bear down—just a light touch does the work quickly, easily!

Complete attachments including Safety Guards available for grinding, filing, polishing, deburring, sharpening, sanding.

Operates on 110 volt AC or DC power. Double cooling fan allows constant use without fear of overheating. Use the Diskette as a portable tool or as a fixed machine when fitted with a Bench Mount.

For further information, see your industrial supplies distributor or write direct for literature and name of nearest dealer.

FRANKLIN BALMAR CORPORATION
Woodberry, Baltimore 11, Md., or 5001 N. Wolcott Ave., Chicago 40, Ill.

DISTRIBUTORS--write for open territory data

▲ For more details circle **NED-1030 D3** on enclosed inquiry slip ▲

New! Revolutionary!

OVERLOAD RELEASE CLUTCH
WORKS *Instantaneously!*

- Instantaneous trigger action
- Works consistently within very close limits
- Your machine will resume operation at exact cycle point of release
- A safety device of universal, industrial application, easily installed on sprocket, chain, belt or gear drives
- Can be used over a wide range of speeds and shaft sizes

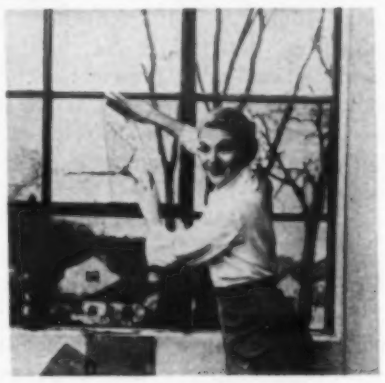
Catalog on Request

Overload Release Clutch Co., Inc. 1162 Stuyvesant Ave. Irvington, N. J.

▲ For more details circle **NED-1031 D3** on enclosed inquiry slip ▲

New Processes & Materials

WINDOW GLARE ELIMINATOR
plastic shields attach to windows



Applicable to glass areas of windows in factories, drafting rooms, mobile equipment and offices, Thermo-Glare Shields eliminate intense sun glare. These vinyl plastic glass-adhering shields also afford reduction in heat transfer through windows and thus reduce air conditioning load or indoor temperatures. Plastic is tough, chemically inert, flame and acid resistant. Applied by merely pressing sheets against wet glass, shields are also usable on skylights. They are available in various colors in sheet form or cut to window dimensions. Made by **Filterzone Autovision Co.**, 649 Lexington Ave., Brooklyn 21, N. Y.

▲ For more details circle **NED-1032 D3** on enclosed inquiry slip ▲

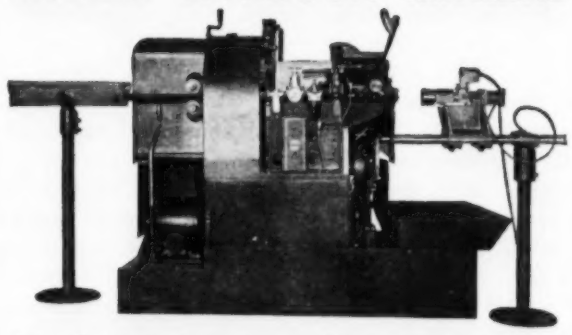
DURABLE FINISH
develops hard, stain-resistant, flexible surface on metal products

Reported to be 50 per cent harder than standard enamels, Nubelon S industrial baking enamel produces a stain resistant, flexible finish on all types of metal products. It also imparts excellent resistance to abrasion, corrosion and chemical action. Hardness is obtained without brittleness, with result that cracking and chipping are practically eliminated.

Finish is adaptable for household appliances because such things as lipstick, vegetable dyes, fruit and mustard stains and discoloring vapors do not penetrate surface, and marks can be washed off. Applied to metal sheets and fence wire prior to fabrication, coating adheres without cracking during subsequent forming or bending operations. Under test, it will withstand 4000 hours of 20 per cent salt spray without appreciable corrosion. This silicone resin base finish is offered in various shades of whites, grays and yellows as well as blue, tan, green and red. Made by **Glidden Co.**, Berea & Madison Ave., Cleveland 2, O.

▲ For more details circle **NED-1033 D3** on enclosed inquiry slip ▲

MODERN CUTTING-OFF MACHINE



Cuts off longer pieces than regular automatic machine — *any length you want.* FAST cutting and chamfering of tubing, pipe, shafting. Check the following figures:

½" Tubing Cuts and Chamfers both outside edges of ½" .030 wall tubing, 5" lengths, every 2.5 seconds.

1¼" Cold Rolled Cuts and Chamfers both ends, 20" long, at rate of 1 every 20 seconds.

1" Tubing Cuts and Chamfers both outside edges, pieces 3" long. One every 3 seconds.

4" THREADED STUDS

Modern Automatic Cutting-Off Machines available in 4 sizes, handling work up to 6¾" O.D.

WRITE FOR CATALOG Cut and chamfered at one time—in 8 sec.—from 10 ft. length of stock already threaded (¾" U. S. Standard.) Clean cut. Clean chamfer. Nuts start easily, with no extra finishing required.

MODERN MACHINE TOOL CO.
JACKSON MICHIGAN

▲ For more details circle **NED-1034 D3** on enclosed inquiry slip ▲

Big Shaper Performance Small Shaper Price

The SHELDON 12" Back-Geared Shaper is neither too big, nor too small. It is just right for most shaper work in most tool rooms and shops.

In weight, design features, capacity and performance, it is a "big shaper." In price, operating cost and floor space, it resembles a "small shaper." It is the logical 1st shaper for the small shop and a cost-cutting tool in multiple installations in large plants.

Write for Catalog.

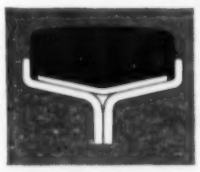
SHELDON
CHICAGO U. S. A.
SHELDON MACHINE CO., Inc., 4215 N. Knox Ave., Chicago 41, Illinois

▲ For more details circle **NED-1035 D3** on enclosed inquiry slip ▲

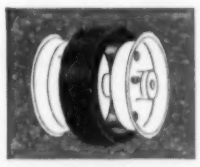
AT LAST! something **REALLY NEW** in industrial wheels...

Rapistan's **MB**

The first STEEL BASED rubber tire demountable wheel



Live rubber tread is bonded for life to band of steel. Cannot slip, stretch or creep. Neoprene available at no extra cost.



Just four bolts to loosen for tire replacement. One-piece hub assembly with felt-sealed roller bearings, extra-large grease reservoir, steel hubcap.

Now it's a fact. A tested fact! A demountable wheel with a thick, live rubber tire *bonded to a band of steel!* A wheel that gives you the performance of a molded-on rubber type . . . the quality of a high-priced pressed-on industrial type . . . and the economy of a demountable type wheel.

Your savings add up to 30%

The MB wheel costs about 10% less than the average molded-on wheel. But you really save money when the tire is worn. You don't discard the wheel. You don't ship it back for retread. You simply replace its steel-bonded tire quickly and inexpensively. Result—a whopping 30% saving compared to molded-on rubber wheels.

Proved beyond 28 doubts!

Gruelling laboratory "punishment" tests, and comparative service tests conducted for six months in 28 leading plants have proved the Rapistan MB is *it*—superior beyond doubt. The results of these tests are yours for the asking. Write for the facts and judge for yourself.

SEND ME PROOF

Send me test results and comments of fast-users concerning the MB Wheel. Also specifications and prices on sizes now available.

The RAPIDS-STANDARD CO., Inc. 80 Rapistan Bldg., Grand Rapids, Mich.

Rapistan®
Fastest Growing Name in Casters
Representatives in Principal Cities

Name_____
Firm_____
Address_____
City_____ Zone____ State____

▲ For more details circle **NED-1036 D3** on enclosed inquiry slip ▲

BECKER CO_2-POWERED SPRAY GUN

NO COMPRESSOR • NO HOSES
NO ELECTRICAL OUTLETS

USE IT ANYWHERE!

Here's a completely portable sprayer especially designed for the hundreds of industrial uses where costly, cumbersome compressor-type spraying is unnecessary. Sprays paints, oils, varnishes, water-proofing, fire-proofing, etc. Powerful CO_2 cartridge sprays up to one 21 oz. containerful at high pressure. Light in weight for easier spraying. Has brass and stainless inserts, heavy-gauge steel container, comfortable knurled handle grip, and cast aluminum head.

SEE YOUR DISTRIBUTOR or order direct postpaid. Extra CO_2 cartridges at your dealer's or 10 for $1 postpaid.

SULLIVAN-BECKER CO., Dept. 173-D, Kenosha, Wis.

For more details circle NED-1039 D3 on enclosed inquiry slip

LOOK, JOE!
THE ONLY FAST, ECONOMICAL WAY TO RELINE THAT FURNACE or BOILER is the "CLIPPER WAY"

ANY SPECIAL SHAPES . . .
Skews, Splits, Angles, Soaps
CUT IN SECONDS
WITH A
Dustless Clipper MASONRY SAW

A CLIPPER MASONRY SAW WILL PAY FOR ITSELF FROM YOUR SAVINGS IN TIME AND MATERIAL!

Every shape and size refractory cut in seconds! Perfect fitting reline jobs that last longer — cost less. And Clipper's Patented features give you DUSTLESS cutting, instant Portability and complete flexibility.

It's YOURS on...
FREE TRIAL . . .

Discover how CLIPPER will increase profits by increasing production at reduced costs. "On the Job" FREE TRIAL guarantees satisfaction at no obligation.

DEPEND on CLIPPER SUPERIOR BLADES

...all specifications of Abrasive, Diamond & "CBR" (Break-Resistant) Blades guaranteed to, "Consistently Provide the fastest cut...at the lowest cost...with the greatest ease!"

OUR ONLY BUSINESS FOR NEARLY 20 YEARS... MASONRY & CONCRETE SAWING

SAME DAY SERVICE FROM YOUR NEAREST FACTORY BRANCH —SEE BELOW

"4 OUT of 5" Concrete Saw Users Choose CLIPPER "CONSAWS"

For Sawing Repair Patches and Trenches in Floors, Runways and Streets

5 MODELS GAS or ELECTRIC POWERED

Clipper MANUFACTURING CO.

• CINCINNATI • BOSTON • WASHINGTON, D.C. • CHARLOTTE, N.C. • PHILADELPHIA • CLEVELAND • ST. LOUIS • CHICAGO • HOUSTON • AUSTIN, TEXAS • SAN FRANCISCO • ATLANTA • DETROIT • PITTSBURGH • NEW YORK • BIRMINGHAM, ALA. • LOS ANGELES • INDIANAPOLIS • ST. PAUL • MILWAUKEE • DALLAS

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TEAR OUT AND MAIL!

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2800 N. WARWICK • KANSAS CITY 8, MO.
Send FREE Literature and Prices on:
☐ CLIPPER MASONRY SAWS ☐ DUSTLESS MODELS ☐ DRY ONLY MODELS
☐ CLIPPER CONSAWS
☐ CLIPPER ABRASIVE BLADES ☐ WET ☐ DRY
☐ CLIPPER DIAMOND BLADES
No. 99 IND.
COMPANY
ADDRESS
CITY STATE

For more details circle NED-1040 D3 on enclosed inquiry slip

New Literature & Catalogs

Oil Distributing Bushings

Moccasin Bushing Co.—Practically any size or type of original or replacement bushing is covered in 4-page illustrated bulletin G9. Also available is engineering data chart No. 429 which gives chemical composition and physical properties of available bronze bushing alloys. Comparative government and society specifications are listed also. Various patterns and sizes of oil or grease grooves can be furnished.

For more details circle NED-1041 D3 on enclosed inquiry slip

Car Load-Securing Device

Evans Products Co.—Both a handbook and a descriptive brochure, 24-page booklet cites examples of how both shippers and carriers have saved money through use of the DF load-securing device for freight cars. Device consists of bar-type members that lock into side structure of car. They take out slack in lading, separate load into easily anchored units and support load whenever necessary to prevent crushing.

For more details circle NED-1042 D3 on enclosed inquiry slip

Woven Wire Conveyor Belts

Cambridge Wire Cloth Co.—132 pages packed with usable information on woven wire conveyor belts for the conveying and treatment of industrial products comprise 1953 illustrated catalog. There is a size and type of woven wire belt for every conceivable purpose. Included in this manual are engineering and application data which enable one to select the right belt for each specific use.

For more details circle NED-1043 D3 on enclosed inquiry slip

Spray Nozzles

Delavan Mfg. Co.—Spray nozzles and accessories are subjects covered by illustrated 12-page catalog 31, 4-page bulletin 148 and Hally nozzle filter bulletin. First deals with nozzles and accessories for air conditioning and industrial applications; second, with Balloffet design oil burner nozzles; and last, with device which prevents clogging of oil burner nozzles.

For more details circle NED-1044 D3 on enclosed inquiry slip

Selling with Matches

Universal Match Corp.—"Fishing for Sales With the Right Bait" is title of 16-page illustrated booklet which shows method and techniques of using book matches to build good will, create better employee relations, sell plant safety, and back up other forms of advertising and selling.

For more details circle NED-1045 D3 on enclosed inquiry slip

Electrical Equipment

Westinghouse Electric Corp.—"Westinghouse Motors, Controls and Associated Equipment for the Automotive Industry" is a 36-page illustrated manual on equipment that meets or surpasses JIC standards for electrical apparatus. Each type of equipment is appraised in relation to its place in the production line. Characteristics of motors, controls, packaged drives, dynamometers and related units for the automotive industries are covered.

For more details circle NED-1046 D3 on enclosed inquiry slip

Fan Service Manual

Available only to production and maintenance executives concerned with ventilating or air moving problems involving fans, 68-page well-illustrated "Clarage Service Manual" covers in detail such factors as installation, initial operation and maintenance of industrial and air-handling fans. Detailed drawings and simple explanations deal with all phases of fan selection and operation. To get your copy, you must write on your company letterhead and make your request directly to Clarage Fan Co., 619 Porter St., Kalamazoo, Mich.

For more details circle NED-1047 D3 on enclosed inquiry slip

Ball Bearing Data

Nice Ball Bearing Co.—Capacity ratings, complete specifications and useful engineering data comprise illustrated ball bearing catalog 150 which is offered to designers and others who specify or purchase ball bearings for new or replacement equipment. Listings cover standard radial, thrust and combined radial-thrust bearings of both ground and unground types. Special bearings and antifriction products such as ball bearing rollers, sheaves, pulleys and wheels are dealt with also.

For more details circle NED-1048 D3 on enclosed inquiry slip

Norgren MICRO-FOG LUBRICATORS

RELY ON

C. A. Norgren Co., Denver, Colorado, uses Ace Nylon Balls as feed tube checks in Micro-Fog Lubricators to provide instant oil flow.

Request samples and bulletin TODAY!

SIZES ⅛"—¾"
TOLERANCES ±.001

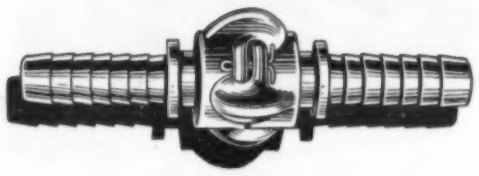
Ace Nylon Balls of DuPont Nylon FM #10001 are mass produced to close tolerances giving you the advantages of toughness at low temperatures, form stability at high temperatures, light weight, chemical and abrasion resistance.

Hundreds of Industrial Applications! Let our engineers advise you

ACE PLASTIC COMPANY
Precision Plastic Fabricators
91-28 Van Wyck Expway. • Jamaica 2, N. Y.

For more details circle NED-1049 D3 on enclosed inquiry slip

"AIR KING"



QUICK-ACTING, UNIVERSAL TYPE

HOSE COUPLING

A strong, durable coupling for quick, tight connections on field or factory air hose. Plain design—no parts to get out of order or clogged with dirt. Made in hose ends and male and female threaded pipe ends. Completely interchangeable. Patented safety locking device is proof against vibration and rough handling. Malleable iron (rust-proofed) or bronze.

From Your Hose Supplier or Industrial Distributor

DIXON VALVE & COUPLING CO.
PRODUCERS OF The Quality Line COUPLINGS • NIPPLES • MENDERS • CLAMPS
"BOSS" "GJ-BOSS" "DIXON" "KING" "AIR KING" "DIX-LOCK"
PHILADELPHIA, PA. BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON

For more details circle NED-1050 D3 on enclosed inquiry slip

CHECK VOLTS and AMPS WITH THE
COLUMBIA
New A.C. CLAMP TYPE VOLT-AMMETER

• Quickly • Accurately • Safely

Columbia Type AC-1 provides ampere readings with a snap by merely clamping jaws around the electrical conductor, without breaking circuit or insulation. Voltage readings are taken quickly and easily with safety plug-in leads. This instrument is the latest addition to the Columbia line of clamp type instruments of the highest quality and dependability.

TYPE AC-1 FEATURES

- Measures Up to 600 Amperes and 600 Volts.
- Amperes: 0/12/60/120/600 A.C.
- Volts: 0/150/600 A.C.
- Convenient Range Switch.
- Insulated Jaws Will Accommodate Conductors up to 1½" diameter, Bus Bars up to 2" x ½".
- Accuracy: 3% full scale.
- Light Weight — Fits Easily Into Pocket.
- High Quality At Low Cost.

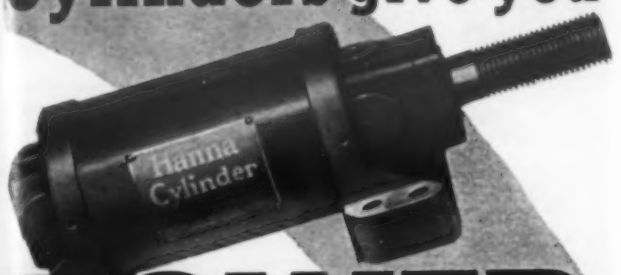
PRICE $75.00 COMPLETE WITH VOLTAGE LEADS AND CARRYING CASE

Inquiries Invited From Distributors *Write for descriptive Bulletin AC-25*

COLUMBIA ELECTRIC MFG. CO. 4525 Hamilton Ave. Cleveland 14, Ohio

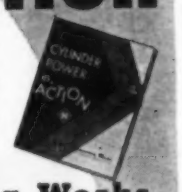
For more details circle NED-1051 D3 on enclosed inquiry slip

Hanna *Fluid Power* Cylinders give you



POWER for production

Hanna Pneumatic and Hydraulic Cylinder power helps cut production costs and increases production in your plant by replacing manual operations with perfectly controlled power. "Cylinder Power in Action" shows you 27 different ways you can put Hanna Cylinders to work for you. Write for free Bulletin 255 TODAY!

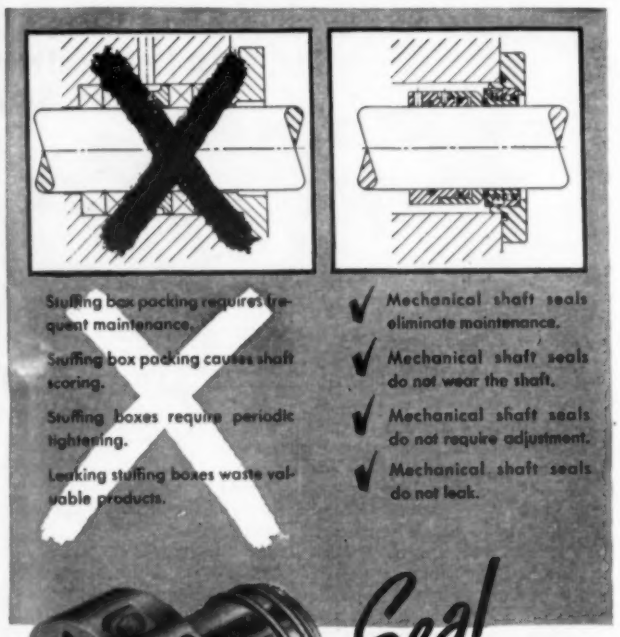


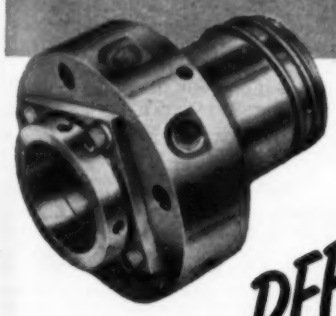
Hanna Engineering Works

HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS

1759 ELSTON AVENUE • CHICAGO 22, ILLINOIS

For more details circle NED-1052 D3 on enclosed inquiry slip





Seal for PERMANENCE ...not maintenance

Beyond a doubt, the seal for pump shafts is the "Sealol" pressure balanced stuffing box shaft seal. If you want to replace maintenance with permanence and substitute economy for upkeep, replace stuffing boxes with "Sealol" seals!

Sealol will welcome the opportunity of working with you. Let us review your requirements for stuffing box seals . . . let us quote on your seal needs. Send blueprints and job description to engineering department, Sealol Corporation, 45 Willard Ave., Providence 5, Rhode Island. Chicago, Cleveland, Los Angeles, Philadelphia, Tulsa. (In Canada: Lyman Tube and Bearings, Ltd., Montreal, Toronto, Winnipeg.)

SEALOL

The Balanced Pressure Seal

For more details circle NED-1053 D3 on enclosed inquiry slip

New Processes & Materials

ADHESIVE FELT TAPE is pressure-sensitive type

Applied by slight pressure to metal, wood or plastic surfaces, adhesive felt tape is used directly from roll without special preparation. Tape is firm, nondrying and waterproof. For unusual applications, special tape can be impregnated with various thermosetting or thermoplastic resins, or with synthetic rubber compounds. Other impregnants can be used to make tape resistant to oils, solvents and chemicals. Tape is available in rolls of any type felt required in thicknesses up to ¼-in. and in widths from ⅜ to 36 in. Flat square or die-cut pieces can be furnished also. Made by **Froll Mfg. Co.**, Dept. 26, 9900 S. Ridgeland Ave., Chicago Ridge, Ill.

For more details circle NED-1054 D3 on enclosed inquiry slip

EXTREME PRESSURE LUBRICANT usable over wide temperature range

Developed for extreme bearing pressure lubrication at temperatures ranging from −40° to 400° F, type U Molykote grease consistency mixture employs a polyalkylene glycol carrier. In addition to extreme temperature applications in aircraft, it is also suitable as lubricant for rubber shaft seals rotating at speeds as high as 8000 rpm. At temperatures up to 800°F, carrier evaporates and Molykote powder impregnates the surface to provide lubrication. Made by **Alpha Corp.**, 177 Hamilton Ave., Greenwich, Conn.

For more details circle NED-1055 D3 on enclosed inquiry slip

INSULATION FINISH is fire retardant and gives protection and identification

Applicable to insulated refrigerant, cold water, steam and other lines and insulated equipment, Insulcolor plastic coating provides both protection and color identification. Applicable by brush or spray, this tough coating withstands temperatures to 160° F without cracking, shrinking or crazing. It can be used over heat insulations, cork pipe coverings, lagging and cork-insulated air conditioning ducts. Six colors are light and dark green, light and dark blue, yellow and buff. White coating affords attractive, sanitary surface where color coding is not required. There is no danger of bleeding when applied over standard asphaltic finishes.

It affords resistance to bumping and abrasion, has high water resisting properties, can be used inside or outside, and employs no inflammable solvents. When dry, it is classified as fire retardant. It is odorless. Dust, dirt, oil and soot are washed off surface readily. Material can be used as adhesive for holding canvas, lagging or other cloth. When used as adhesive, it is diluted with water. Coverage is 35 to 50 sq ft per gallon for two-coat application. Made by **Armstrong Cork Co.**, 1270 State St., Lancaster, Pa.

For more details circle NED-1056 D3 on enclosed inquiry slip

CUTTING FLUID film adheres to tool and work

Anchorlube cutting lubricant for tapping, threading, spot-facing, counterboring, form finishing, hollowing, milling and other metalworking operations provides an adhesive film between tool and work to eliminate friction. An emulsion type lubricant, it is free from objectional odors, will not turn sour or rancid and is noninjurious to skin tissues. Emulsions can be made in hard or soft water. Other characteristics are nonevaporating stabilizing agents, good rustproofing qualities and detergency. It can be used in machining of tough, hard steels, including stainless. Made by **Anchor Chemical Co.**, Dept. N, 10721 Briggs Rd., Cleveland 11, O.

For more details circle NED-1057 D3 on enclosed inquiry slip

FOR many firms a Lake Shore Tote-All eliminates the need for a second conveyor—for others a Tote-All is real handy to have around, because in ten minutes, or less, this sturdy, portable unit converts into either a bulk or package conveyor—simply by adding or removing sideboards and hopper. Here's unbeatable flexibility for yard or warehouse. Coal by the ton—cola by the case, move it all with a Tote-All. Write Lake Shore for details.

LAKE SHORE *Engineering Company*

IRON MOUNTAIN, MICHIGAN

Dealers in all principal cities

For more details circle NED-1058 D3 on enclosed inquiry slip

CINCINNATI ALL-STEEL PRESS BRAKES

feature center line construction motorized ram adjustment with micrometer registers at each end, automatic lubrication weld free joints and other profitable features.

Write for Catalog B-4

THE CINCINNATI SHAPER CO.

CINCINNATI 25, OHIO, U.S.A. SHAPERS • SHEARS • BRAKES

For more details circle NED-1059 D3 on enclosed inquiry slip

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS • OILS • POWDERS • PASTES

COMBINED LIQUIDS AND SOLIDS

1/500 oz. to 2 Pounds
20 to 70 Per Minute
Up to 750° F

SAVE TIME AND MONEY WITH THE MATEER ALL ELECTRIC FILLING HEAD

Totally enclosed, manual or automatic. Accuracy as close as ±½%. Synchronize this self contained filling head with existing production lines and processing systems.

Jacketed and electrically heated hoppers available for handling cold and hot materials up to 750° F. Hot waxes, insulating compounds and asphalts handled without difficulty.

Send full information and samples of material to be tested. Write Dept. 105 for fully illustrated bulletin.

G. DIEHL MATEER & CO.

Lincoln Highway • Devon, Pa.

For more details circle NED-1060 D3 on enclosed inquiry slip

Machine "down-time" cut 40%

with HYPRESSURE Jenny STEAM CLEANER

Your machines are back in production almost twice as fast, if they are Hypressure JENNY steam cleaned before repairs! Actual time studies show that up to 40% of the costly time of skilled mechanics is lost fighting grease and dirt.

Hypressure JENNY not only saves precious time, but pays plus dividends in stepped-up production, fewer lost-time accidents, lower fire-insurance premiums, and increased personnel efficiency.

Write for complete information about this modern aid to increased production. There's no obligation; so why not do it now?

There is a Hypressure Jenny Steam Cleaner for every Mill... Mine... Factory... Farm and Automotive need

Distributors in all parts of the world—For local representative see classified Telephone Directory

HYPRESSURE JENNY DIVISION — HOMESTEAD VALVE MANUFACTURING CO. Serving since 1892 P. O. Box 84 Coraopolis, Pa.

▲ For more details circle NED-1061 D3 on enclosed inquiry slip ▲

HOW YOU CAN hear better TO TELEPHONE

Loudness of Noise Reduced 50%* Inside a BURGESS-MANNING Acousti-Booth

- Thick walls of sound absorbing material, patented design, and craftsmanlike construction reduce the loudness of noise by 50%*... leaving a zone of quiet for ease of telephoning.
- Doorless construction makes for a light, airy, well ventilated booth... easy to keep clean... low maintenance.
- Easy to move... Suited to any noisy location... Wall and floor models... Handsome in appearance.

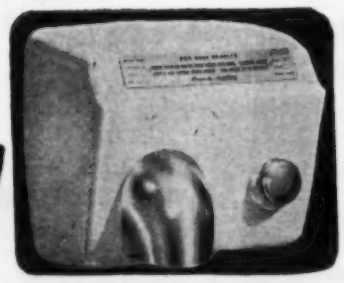
Write for Bulletin A-107 — Model 211 Floor Model

* Based on studies by a prominent research organization.

BURGESS-MANNING COMPANY
Architectural Products Division
5970-C Northwest Highway, Chicago 31, Illinois

▲ For more details circle NED-1062 D3 on enclosed inquiry slip ▲

NO BILLS!



Yes, no bills for Towels and Washroom Maintenance
With the perfected, automatic
NATIONAL HAND DRYER
—dries hands completely dry in 20 seconds!

Eliminates the constantly mounting cost of paper towels or towel service—no storage problem, no filling of cabinets, no removal, cleaning and disposal time or attention. No time when clean, sanitary drying service is not available.

Do you really know how much your wash room service is costing you?

One fast-acting, tamper-proof NATIONAL HAND DRYER serves 1½ to 2 wash basins, pays for its cost from actual cash outlays in 12 to 18 months, gives quick, soothing drying service at the touch of a button.

Let us show you an actual example of continuous cost savings with NATIONAL DRYERS over towels. Now Available for Industrial Users—220-volt Single Phase Models.

National Dryer Sales Corporation, Dept. NE3-4, 616 West Adams St., Chicago 6, Ill.
Without obligation, send complete information on National Hand Dryers and example of cost savings.
( ) Also send information on National Hair Dryers.
Name .....
Address .....
City ..... Zone ..... State .....

▲ For more details circle NED-1063 D3 on enclosed inquiry slip ▲

New Literature & Catalogs

Measuring Surface Flatness

Crane Packing Co.—Measuring of surface flatness through light band reading is subject treated in 6-page instructional bulletin. Interpretation of these readings is explained in detail. Details of care and operation of monochromatic lights and optical flats are offered, and particulars on line of precision measuring and lapping equipment are given as well.

▲ For more details circle NED-1064 D3 on enclosed inquiry slip ▲

Dial Thermometers

Taylor Instrument Cos.—Latest development in 6-in. Bourdon spring dial indicators for temperature, pressure and load applications are presented in 24-page bulletin 98214. Generously illustrated, it supplies considerable data on features, dial and scales available as well as reference material on types of actuation. Mounting dimensions for different instruments are also included.

▲ For more details circle NED-1065 D3 on enclosed inquiry slip ▲

Hole Punching & Notching Units

Wales-Strippit Corp.—Wales type CJ hole punching units that punch holes in up to ¼-in. thick mild steel and type NJ notching units which also handle ¼-in. mild steel are described, illustrated and specified in 16-page third edition of catalog CJ. In addition, accessories for press brake setups are shown.

▲ For more details circle NED-1066 D3 on enclosed inquiry slip ▲

Plastic Wire & Cable Insulation

B. F. Goodrich Chemical Co.—"Geon in the Wire and Cable Industry" is title of 16-page illustrated bulletin which presents electrical, physical and chemical properties of most important Geon vinyl electrical compounds currently available. Compounding with Geon resins is also discussed.

▲ For more details circle NED-1067 D3 on enclosed inquiry slip ▲

Tool & Die Welding

Welding Equipment & Supply Co.—Two welding manuals now available are "Eureka Tool and Die, or Maintenance Welding in the Forge Shop" and "Eureka Tool and Die Welding Guide." They illustrate applications of the metallic arc, atomic hydrogen and atomic arc phases of welding.

▲ For more details circle NED-1068 D3 on enclosed inquiry slip ▲

Flow Meter Line

Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—Set of seven specification sheets covering flow meters is now available. Nos. 241 and 242 cover electric and mechanical evenly graduated flow meter bodies; Nos. 243 through 247 cover square root flow meters and liquid level meters; and No. 244 also includes evenly graduated electric flow meters (inductance bridge receivers).

▲ For more details circle NED-1069 D3 on enclosed inquiry slip ▲

Woolen & Worsted Mill Equipment

Westinghouse Electric Corp.—40-page illustrated booklet relates to electrical equipment for woolen and worsted mills. Starting with opening and picking rooms through to finishing department, it discusses applications and design characteristics of available motors, controls, gearmotors and drives for spinning, warping, slashing and other operations. Other subjects include lighting, power systems, maintenance service and air conditioning.

▲ For more details circle NED-1070 D3 on enclosed inquiry slip ▲

Boring Tools & Accessories

Flynn Mfg. Co.—Here's an 8-page catalog that has specifications, photographs, dimensions and dimensional drawings of a line of boring tools and accessories for toolroom and production operations. Included are V-block construction safety, dovetail type boring, double duty enclosed jaw construction and offset boring heads; arbors and adaptors; and boring bars and tools.

▲ For more details circle NED-1071 D3 on enclosed inquiry slip ▲

Photoelectric Controls

Worner Electronic Devices — 16-page illustrated bulletin "How To Use Fotolectric Systems in Your Business" provides simplified understanding of electric-eye supervision of automatic production operations, packaging, sorting, inspecting, rejection, lighting, safety and property protection. Complete range of photoelectric equipment for diversified purposes is described.

▲ For more details circle NED-1072 D3 on enclosed inquiry slip ▲

WHENEVER A BLOW IS REQUIRED... consider lightning-fast ELECTROPUNCH

WIDELY USED TO: STAKE, MARK, SWAGE, CUT OFF, RIVET, CRIMP, BEND, PUNCH, DIMPLE

Whenever your production process demands a blow, ELECTROPUNCH may be just the machine you need. This all-electric impact hammer delivers a lightning-fast, controllable blow. Produces up to 10,000 pieces per hr. with automatic switching—as high as 5,000 pieces per hr. with hand or foot switching. Ideal for steel stamping, swaging, etc.

ELECTROPUNCH is portable, uses only one sq. ft. of bench space, plugs into any 115 V., A. C. outlet. Lightest model (illustrated) sells for only $90.75.

Write for descriptive folder.

BLACK & WEBSTER, INC.
Dept. 1, 445 Watertown Street, Newton 58, Mass.
Phone: Frank Webster — Bigelow 4-6370

▲ For more details circle NED-1073 D3 on enclosed inquiry slip ▲

Announcing THE NEW WELLS Model 800 Horizontal Metal Cutting BAND SAW

Approved for use with the revolutionary NEW MILFORD REZISTOR HIGH SPEED STEEL BAND SAW BLADE
Designed for production cut-off work, particularly for cutting stainless steel

THE NEW WELLS MODEL 800 is the first metal cutting band saw designed to capitalize on the remarkable advantages, and to be approved for use with the new *Milford Rezistor* High Speed Steel Band Saw Blade.

Model 800, engineered for heavy duty work, provides for practical and efficient use of blades of 1" in width, especially the new High Speed Steel Band Saw Blade. This blade, used with Wells Model 800, has established new records . . . higher level of cutting efficiency . . . more cuts per blade.

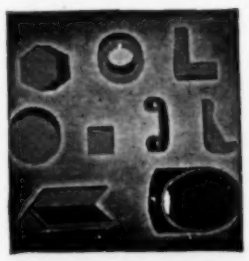
Wells Manufacturing Corporation will be glad to study your metal cutting jobs to determine which blade, when used with Model 800, will show you cost savings

Wells — Products by Wells are Practical
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 HARDING ST., THREE RIVERS, MICHIGAN

▲ For more details circle NED-1074 D3 on enclosed inquiry slip ▲

THE CINCINNATI Wet Abrasive Cut-Off Machines

Cut Down ON CUT-OFF TIME!



Cut any metal, solids or tubing fast and accurately! Capacity up to 2-¼" in solids, 3-½" in tubing. Straight or angle cuts up to 45°. And look at these speeds: 2" bar stock in 15 seconds . . . 2" tubing, 3/32" wall, in 10 seconds . . . 2" angle iron, ⅛" thick, 45° angle, in eight seconds. Special features include Cincinnati's exclusive water nozzle, insuring proper coolant flow for longer wheel life; and foot-operated vise, freeing operator's hands for faster production. Write today for Bulletin 53FD.

TRADE The Cincinnati MARK

THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
CINCINNATI 8, OHIO

▲ For more details circle NED-1075 D3 on enclosed inquiry slip ▲

The lowest costing lift truck you can buy, the Red Arrow features unusual ease of operation, speed and economy. Maintenance cost practically nil. Machined standardized parts and machined bolted frame . . . eliminate downtime. Pays for itself many times a year in time and manpower saved.
Send for Bulletin 252 Today.

LIFT TRUCKS INC., CINCINNATI 14, OHIO

▲ For more details circle NED-1076 D3 on enclosed inquiry slip ▲

DEVIL'S PUTTY

FOR EASIER SKIMMING

DEVIL'S PUTTY . . . a new graphite impregnated plastic refractory for: steel and gray iron ladle linings; making up spouts and runners; linings for ferrous and non-ferrous metal melting furnaces and similar applications.

DEVIL'S PUTTY reduces refractory inclusions, thus producing cleaner castings; withstands severe thermal shock without "sluffing off"; contains chemically treated graphite that will not burn out of the mix, which aids surface lubrication and permits cleaner and faster pours. Molten metal has no sticking tendency to DEVIL'S PUTTY lining, so, slag rises quickly to top for easy skimming.

BOTFIELD

Write for useful literature . . . and the name of your nearest Botfield Distributor.

REFRACTORIES CO.
787 S. Swanson St., Philadelphia 47, Pa.
In Canada
Canadian Botfield Refractories Co. Ltd., 171 Eastern Avenue, Toronto

▲ For more details circle NED-1077 D3 on enclosed inquiry slip ▲

Attention!

INSTRUMENT ENGINEERS and PLANT ENGINEERS

Get This Information-Packed Literature Now If you specify, buy or maintain instruments that record, control or measure temperature and or pressure, then you should have a complete set of Gotham catalogs in your file.

Write for these data-filled catalogs today.

Keep Everything Under Control With Gotham

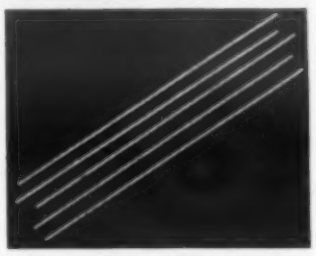
GOTHAM INSTRUMENTS

DIVISION OF AMERICAN MACHINE AND METALS, INC.
Dept. 1, 233 Broadway, New York, N. Y.

▲ For more details circle NED-1078 D3 on enclosed inquiry slip ▲

New Processes & Materials

MINIATURE METAL TUBES
sizes down to 0.010-in. OD



A wide variety of miniature and sub-miniature seamless metal tubing for use as component parts of transistors and other advanced electronic equipment is now available. Tubing can be made with outside diameters down to 0.010-in. walls down to 0.0010-in. and tolerances as close as 0.00025-in. and can be in metals of almost any desired analysis. Made by **Uniform Tubes, Inc.**, 1220 Level Rd., Collegeville 2, Pa.

▲ For more details circle NED-1079 D3 on enclosed inquiry slip ▲

FAST DRYING ENAMEL
is free of toxic ingredients

Fast drying Speed Enamel is a real pigmented enamel, but free of lead pigments and toxic ingredients that contribute to paint poisoning. It is practical for finishing manufactured children's toys and nursery furniture which might be subject to children's nibbling. Applicable by brush or spray, enamel dries to hard high gloss finish in four hours without streaks. It withstands scuffing, grease, boiling liquids, harsh soap and constant scrubbing. The 18 available colors as well as white and black are nonfading and weather resistant for outdoor use. Made by **Sapolin Paints Inc.**, Dept. N, 229 E. 42nd St., New York, N. Y.

▲ For more details circle NED-1080 D3 on enclosed inquiry slip ▲

WOOD PRESERVATIVE
also acts as water repellent

Chemicals added to copper naphthenate in Cuprinol wood preservative tend to give it water repellent quality and allow maximum naphthenate penetration. Material protects wood against dry rot, wood borers and termites, plus minimizing the tendency of cured wood to warp, swell or shrink. Application can be by brush, spray or dip. Cuprinol is nontoxic, and once dry, will not harm humans, plants or animals. Another use is as a primer coat under paint to reduce blistering, peeling and discoloration due to mildew. Made by **Darworth Inc.**, Cuprinol Div., 12 Pear St., Simsbury 38, Conn.

▲ For more details circle NED-1081 D3 on enclosed inquiry slip ▲

FOR TOP-QUALITY FORGINGS FOR THE DC-6

Douglas counts on FLASH-O-LENS inspection

Soundness of forgings for the DC-6 can be determined more readily by using FLASH-O-LENS, reports Douglas Aircraft Co.

THE REASON: This handy device *spotlights* the work and *magnifies* it in sharp detail. Interpretation of grain structure — key to forging quality — is speeded up . . . results are more accurate.

You too may find that FLASH-O-LENS will save inspection time and improve product quality. Battery and plug-in models available — write for literature.

E. W. PIKE & COMPANY
492 NORTH AVE. ELIZABETH, N. J.

▲ For more details circle NED-1082 D3 on enclosed inquiry slip ▲

Safety Lesson No. 1 COD

"MISSING LINKS"*
Repair Chains Better

Do away with danger of opening up under heavy load by specifying Laughlin "Missing Links".

Pressure fitting of matched halves with special dies insures perfect fit, eliminates tendency of loose-fitting links to shear.

Links, not rivets, carry the load. Interlocking lugs grip firmer, bear the weight. Ordinary round lugs fitted into round holes don't have holding power.

"Missing Links" are also supplied in an exclusive pear shaped design in sizes for 3/8" to 1 1/8" chain. Free Catalog No. 150 lists full line.

For Safety's Sake . . . Say LAUGHLIN

THE THOMAS LAUGHLIN CO.
T. M. REG. 419 Fore Street, Portland, Maine

Buy from your local distributor

▲ For more details circle NED-1083 D3 on enclosed inquiry slip ▲

For "Custom Engineered Design" At Low Unit Cost

specify

STANDARDIZED Pfaudler
stainless steel heat exchangers

Engineered to your own individual requirements, Pfaudler stainless steel heat exchangers are backed by years of experience in the process industries. Yet, they cost you no more than standard, assembly line units.

THE PFAUDLER FLEXIBLE STANDARD program makes this unusual economy possible. A large inventory of standard heads, tubes and shells allows you to select the most applicable combination of length and diameter for a given heat transfer area. These can be readily equipped with nozzles of any size and in any position—either flanged or threaded. And new production line methods make possible rapid deliveries (4 to 12 weeks).

COMPLETE LINE — The flexible standard program applies to fixed tube sheet, single or multi-pass, tube and/or shell side stainless steel units up to 10" in diameter. In addition, Pfaudler heat exchangers are available with shell diameters from 4" to 24" in four basic types of construction . . . fixed tube sheet condenser, outside packed floating head design with removable tube bundle and shell, internal floating head with removable tube bundle and shell, "U" tube construction with removable bundle.

SEND FOR THIS PFAUDLER DATA BOOK — Packed with facts, this 40-page heat exchanger manual has all the data you need to work out capacity and type problems. Easy-to-follow tables, curves and charts. Full details on Pfaudler heat exchangers. Mail the coupon for your copy.

Pfaudler

Engineers and fabricators of corrosion resistant process equipment since 1884

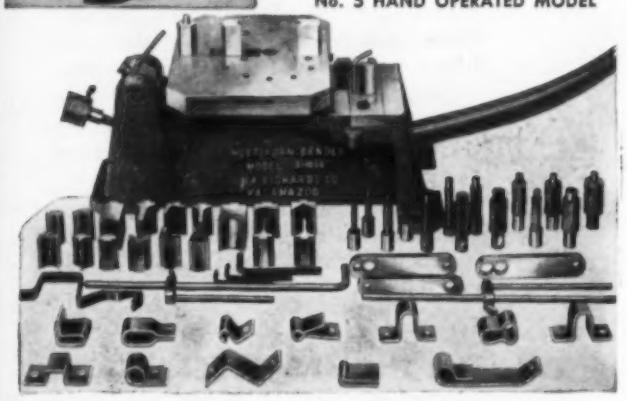
GLASSED STEEL • HASTELLOY • ALUMINUM • CARBON STEEL • SOLID OR CLAD STAINLESS STEEL • NICKEL • INCONEL • MONEL

THE PFAUDLER CO., Dept. NED-4, Rochester 3, N. Y.
Please send me the Pfaudler Heat Exchanger Manual No. 837
Name .....
Title .....
Company .....
Address .....
City ..... Zone ..... State .....

▲ For more details circle NED-1084 D3 on enclosed inquiry slip ▲

THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling—Saves Die Costs
Saves on Expensive Presses
This efficient machine is useful in all lines of trade, spring plants, radio and electrical equipment manufacturers. Complete with tooling, for bending material up to ⅛" x 1½".
No. 5 HAND OPERATED MODEL



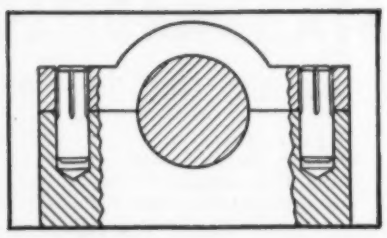
AIR OPERATED MODELS AVAILABLE IN THIS AND LARGER SIZES

FIVE-IN-ONE-TOOL—ALSO LARGER MODELS
IT BENDS FLAT AND ROUND STOCK INTO ANY SHAPE, CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. MYRTLE & PITCHER STS. KALAMAZOO, MICHIGAN

For more details circle NED-1085 D3 on enclosed inquiry slip

FOR SIMPLE... ECONOMICAL
PRECISION ALIGNMENT
USE
LOK DOWELS



★ FASTER ASSEMBLY AND DISASSEMBLY
★ IMMUNE TO SHOCK, VIBRATION AND TEMPERATURE CHANGE
★ LOK DOWELS TAKE THE WEAR . . . NO DAMAGE TO HOLE WALLS

FOR ESTABLISHING AND RETAINING PRECISE ALIGNMENT OF MACHINE PARTS AND COMPONENTS

LOK DOWELS are precision made, centerless ground pins with four parallel grooves impressed along half their length. The grooved end of the LOK DOWEL stays permanently fixed after installation, while the ungrooved end of the pin is easily slipped out of the mating part. To use LOK DOWELS, no special hole treatment beyond normal reaming is required. Holes in mating parts are of uniform size and are not damaged or distorted during assembly, disassembly or reassembly. Write for samples and illustrated circular.

DRIV-LOK PIN COMPANY
717 Chauncey St., Sycamore, Illinois

For more details circle NED-1086 D3 on enclosed inquiry slip

New Literature & Catalogs

Blast Cleaning Techniques

American Wheelabrator & Equipment Corp.—How airless blast cleaning can be used in nonferrous foundries to effect reductions in finishing costs of all types of castings is shown in 4-page illustrated bulletin 904. Case histories cover use of blast cleaning on brass, bronze, aluminum and other metal products.

For more details circle NED-1087 D3 on enclosed inquiry slip

How to Buff

Hanson-Van Winkle-Munning Co.—12-page illustrated bulletin B-100 deals with cutting and coloring with disk type buffs. Three basic types of buffs are discussed, and data are given to aid in selection and use of each for particular finishing or cutting application.

For more details circle NED-1088 D3 on enclosed inquiry slip

Vibration Preventive

Hobsite Products Co.—Just how Keldur vibration isolation pads reduce vibration, shock and noise and minimize wear of machines and equipment is explained in 2-page illustrated data sheet F-127. Material is offered in up to 36-in. square sheets in ¼, ⅜ and ½-in. thicknesses.

For more details circle NED-1089 D3 on enclosed inquiry slip

Motor Controls

Allen-Bradley Co.—28 pages of informative data on controls, starters and safety devices are contained in illustrated catalog "Quality Line of Motor Controls for All Industries." Manufacturing techniques, ratings and application information are detailed.

For more details circle NED-1090 D3 on enclosed inquiry slip

Production Planning

Diebold, Inc.—Benefits derived from installation of a production control system based on V-line business forms and trays in plant of large manufacturer are cited in 4-page illustrated bulletin. Over 25,000 items are actively controlled without need for extra clerical help, even at inventory time.

For more details circle NED-1091 D3 on enclosed inquiry slip

Diaphragm Chuck

Sheffer Collet Co.—Use of sturdy diaphragm and simple design enable the Super Grip chuck to hold with grip that is eight times that of line pressure. Of collet type, standard and special designs are covered in 8-page illustrated bulletin on this collet chuck.

For more details circle NED-1092 D3 on enclosed inquiry slip

Pinch-Type Valve

Farris Flexible Valve Corp.—A complete line of pinch-type nonplugging Flexible valves is described in 24-page illustrated catalog FL382. Made in wide ranges of sizes and constructions, valves are comprised of clamp type mechanism and hose type valve body. Operation merely clamps section of rubber, Neoprene or special hose closed.

For more details circle NED-1093 D3 on enclosed inquiry slip

Tools-Gages-Machine Tool Accessories

DeWitt Equipment Co.—24-page illustrated catalog contains details and prices of wide range of standard makes of vises, chucks, turrets, tools, arbors, collets, die heads, chasers, drill sets, reamers, dividing heads, precision measuring and gaging tools, taps and dies. Both American and European made products are shown.

For more details circle NED-1094 D3 on enclosed inquiry slip

Automatic Milling Machines

Cincinnati Milling Machine Co.—Details of the No. 2-24 Cincinnati automatic milling machines are given in 28-page illustrated catalog M-1760. Offered in standard 3-hp and high speed 5-hp models, line features automatic two-way table cycles, wide range of speeds and feeds, power rapid traverse, and automatic rise and fall designs.

For more details circle NED-1095 D3 on enclosed inquiry slip

V-Belt Sheaves & Hubs

Fort Worth Steel & Machinery Co.—Specification guide No. 83 gives dimensions, weights and application data on line of QD V-belt sheaves and hubs. These drive units are readily installed, and wide range of stock sizes is available for practically any belt drive requirement. Drive selection information and engineering data are included.

For more details circle NED-1096 D3 on enclosed inquiry slip

Here's TROUBLE-FREE FLOW CONTROL
. . . for corrosive services

Hills-McCanna Valves are suitable for air, water, gases, volatile and viscous substances, semi-solids, etc. Handwheel or lever operated or choice of automatic or remote operators. Choice of 14 diaphragm materials; 49 body materials. Sizes ⅜" to 14". Write for catalog.

HILLS-McCANNA CO.
2455 W. Nelson Street • Chicago 18, Illinois

HILLS-McCANNA
saunders patent diaphragm valves
Also manufacturers of—Proportioning Pumps
Force-Feed Lubricators • Magnesium Alloy Castings

For more details circle NED-1097 D3 on enclosed inquiry slip

TOOL of a THOUSAND USES

TRI-SAW, All-Purpose, Portable Power Hacksaw

Still the same low price. ONLY $37.50

Makes Any Cutting Job Quick . . . Easy . . . Economical

Simply attach Tri-Saw to any 1/4" or 5/16" heavy duty drill—then zip through wood, sheet metal, heavy metal, nails, pipe and what have you, in seconds! Use this sensational time and work saving tool and you'll say it's the best all-purpose saw on the market. Only Tri-Saw gives you these exceptional features:

- No side torque or spin
- One shot lubrication
- Completely replaceable high speed bearings
- Improved dirt seal
- Needs no starting hole

ATTENTION JOBBERS AND DEALERS . . . Profitable opportunities for aggressive distributors. Write for details.
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TRI-SAW CORPORATION
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For more details circle NED-1098 D3 on enclosed inquiry slip

Give the Boot to STATIC Explosions!

Conductive Bootie safely disperses static stored in human body

Worn comfortably over ordinary shoes, the LEGGE Conductive Bootie drains dangerous body currents from skin to floor.

Lightweight, easy to wear, easy to store. Laundered after each wearing so it need not be individually assigned. Conductive elements cannot be washed out. Effective on every type conductive floor. Conforms with NFPA Code #56.

COSTS ONLY $5.75 PER PAIR

The Bootie comes in 4 sizes: **Medium Male** fits men's shoes up to size **9; Large Male,** sizes **10-13; Medium Female,** sizes **3-6; Large Female,** sizes **7-10.** Costs less than half as much as most conductive shoes with none of the bother. ORDER NOW! **$5:75 pr.** Or write today for full information. Walter G. LEGGE Company, Inc., Dept. ND-4, 101 Park Ave., New York 17, N. Y. Branch offices in principal cities.

YOU'RE SAFE WHEN YOU HAVE LEGGE TO STAND ON
LEGGE SYSTEM of Safety Floor Maintenance

For more details circle NED-1099 D3 on enclosed inquiry slip

INDUSTRIAL buyers have learned to depend on ANTI-CORROSIVE for fast, dependable service on all types of stainless steel fastenings. Draw on our IN STOCK inventory of more than 7,000 items and sizes and a production capacity geared to produce precision fastenings in large or small quantities, from huge ⅞" hexagon head bolts to tiny #0-80 machine screw nuts.

Write for Catalog 53T today.

anti-corrosive metal products co., inc.
castleton-on-hudson, new york

▲ For more details circle **NED-1100 D3** on enclosed inquiry slip ▲

NEWEST

in industry's most complete line of filtration equipment

HOFFMAN
Vacu-matic
FILTER

for automatic, continuous filtering of water soluble coolant from grinders, hones and other machine tools

Write for Bulletin A-915

Once again Hoffman meets your particular filtration problem with equipment specifically designed for the job! The "Vacu-matic," a continuous suction, endless belt filter, serves individual machines with clean coolant *automatically*. Uses vacuum (not gravity) for high flow rates — coolant is drawn through belt which deposits solid particles as dry sludge in tote box for easy removal.

Air moving through the filter belt not only dries the sludge, it keeps coolant at or below room temperatures—reduces bacteria common to dirty coolant. The "Vacu-matic" is complete, compact, ready for hook-up on present machines. Two sizes — for 20 g.p.m. and 40 g.p.m.

High Flow Rate • Self-Cleaning
Dry Sludge • Keeps Coolant Cool

Hoffman's nationwide staff of filtration engineers is ready now to give you details on how "Vacu-matic" can protect the production of your machine tools. Like all Hoffman specialized filtration equipment, the "Vacu-matic" is designed to pay for itself by reducing down time, extending tool life, and safeguarding quality control. Write today for free technical bulletins.

For Groups of Machines
HOFFMAN FLOTATION SYSTEMS—*20 to 1,000 g.p.m.*
Fully Automatic
Write for Bulletin A-690

TOP IN VALUE · SINCE 1905
Hoffman
INDUSTRIAL FILTRATION EQUIPMENT & SERVICE
U. S. HOFFMAN MACHINERY CORP., 225 LAMSON STREET, SYRACUSE 6, N. Y.
In Canada: Canadian Hoffman Machinery Co., Ltd., Newmarket, Ont.

▲ For more details circle **NED-1101 D3** on enclosed inquiry slip ▲

New Processes & Materials

SPRAY CLEANER
universal cleaner applied with handy pressure spray gun

Refilling in a few seconds and sufficient cleaner capacity for hours of cleaning are features of this hand-sized pressure spray gun designated, First Universal Cleaner. It is charged with air pressure from shop air line or any source of pressurized air. Virtually all cleaning jobs are completed merely by spraying surfaces to be cleaned with Spray White cleaning fluid and wiping it off.

Process removes grease, oil, wax, gums, dirt, dye, ink, cutting soap, light carbon and other soils with complete safety. Such materials as metals, plastics, rubber, porcelain, composition, concrete or wood products can be cleaned when handled according to directions. Rubbing or scouring is seldom required. Gun can be refilled with Spray White in a few seconds. Gun and cleaning material are products of **Kelite Products, Inc.**, 1250 N. Main St., Los Angeles 12, Calif.

▲ For more details circle **NED-1102 D3** on enclosed inquiry slip ▲

SPECIALTY LUBRICANTS
additive type with petroleum base

Tenac is one of three new additive-treated lubricants with petroleum base. It is intended for use as an open gear lubricant applied by spray, dip or brush. It is cut back by a solvent which, following evaporation, leaves a tough and adhesive semiplastic film on the gear surface. Hi-Temp Oil 303 contains a synthetic high temperature fluid and molybdenum disulphide which give it fluid advantages, good load carrying capacity and ability to resist breakdown at temperatures up to 800° F. Cosmolube 101 and 102 are high temperature greases that are a colloidal mixture with no melting point. Both retain their form to the point of burning. Made by **E. F. Houghton & Co.**, 305 W. Lehigh Ave., Philadelphia 33, Pa.

▲ For more details circle **NED-1103 D3** on enclosed inquiry slip ▲

VINYL PLASTIC
features low processing temperature

Polyvinyl chloride resin designated as Pliovic G80V is general purpose straight vinyl material having intrinsic viscosity of 0.80. It is designed to complement use of previously developed Pliovic G90V in calendering, coating, and extruding operations. Because of its lower viscosity, product's processing temperature requirements are 20° to 40° F lower than those of G90V. Thermal stability, plus low fusing temperatures, permits more rapid calendering and extrusion. Both clear and pigmented products benefit from resin's light stability and good color. Soft stocks are easily compounded for fabric coatings. Made by **Goodyear Tire & Rubber Co.**, Chemical Div., 1144 E. Market St., Akron 16, O.

▲ For more details circle **NED-1104 D3** on enclosed inquiry slip ▲

SAND BLAST HOSE
is light and flexible

Built with a glass-smooth inside surface, this sand blast hose is capable of conducting sand, steel shot or other sharp abrasive materials at high speed with

a minimum of wear. It is made with a ¼-in. thick antistatic rubber tube and is reinforced with a single braid of multiple strands of high tensile strength cotton cord. Hose is highly flexible and light in weight, weighing from 0.62 to 1.04 lb per ft for sizes ranging from ¾ to 1½ in. ID. Made by **B. F. Goodrich Co.**, Dept. E, 500 S. Main St., Akron 18, O.

▲ For more details circle **NED-1105 D3** on enclosed inquiry slip ▲

FLOOR TRUCKS

"KEEP LOADS ALIVE"
STANDARD SIZES & TYPES
SPECIAL DESIGNS
VARIOUS TYPE WHEELS:
IRON - RUBBER - PNEUMATIC
Write for catalog

ORANGEVILLE MFG. CO.
Orangeville 12, Pa.
"Since 1879"

FLOOR TRUCKS ORANGEVILLE

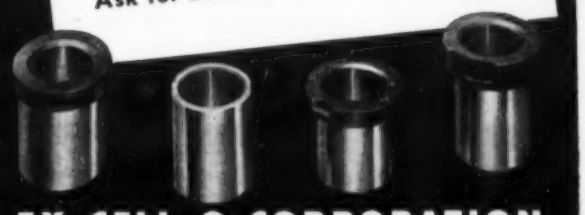
▲ For more details circle **NED-1106 D3** on enclosed inquiry slip ▲

XLO

Ex-Cell-O Drill Jig Bushings Have All These Features . . .

- Selected premium grade tool steel.
- Precision ground inside and out and under the head.
- Concentricity assured by grinding on arbors after the holes are finished.
- Hardened to 62-64 Rockwell "C."
- Uniformity of material, dimensions, finish, and hardness.
- Prompt delivery from stocks of standard sizes in Detroit, New York, Los Angeles, and Toronto.
- Largest bushing users in the country are Ex-Cell-O customers.

Ask for Bushing Catalog No. 35371.



EX-CELL-O CORPORATION
53-17 DETROIT 32, MICHIGAN

▲ For more details circle **NED-1107 D3** on enclosed inquiry slip ▲

NICE Announces 'C' Series

"C" Series—A new NICE inch size line of precision radial bearings.

PRODUCT DESIGNERS will be interested in the "cost saving" possibilities offered by this new line of single row, retainer type, precision radial bearings. Made in inch dimensions which correspond to established light duty inch standard sizes, "C" series bearings are designed for light duty radial, thrust or combined radial and thrust load applications and speeds in the neighborhood of 5000 R.P.M. maximum. They are available without shields, single shielded or double shielded.

For complete information on "C" series bearings and other new additions to the NICE Line write for catalog No. 150.

NICE
NICE BALL BEARING COMPANY
NICETOWN · PHILADELPHIA · PENNSYLVANIA

▲ For more details circle **NED-1108 D3** on enclosed inquiry slip ▲

Grammes
METAL NAME PLATES
are right in price in any quantity

● Grammes metal craftsmen will match the quality of your product with name plates that stand out. They offer you experienced design help, too—making sure your plates have the *readability* you want. Grammes name plates are known for eye appealing finishes that *last!*

SUBMIT ROUGH SKETCH or blueprint for prompt recommendations and prices. Meantime write for new booklet, "Tips on Name Plate Selection and Design".

L.F. GRAMMES & SONS INCORPORATED ALLENTOWN, PA.
NAME PLATES DIALS
TRIMS • BEZELS PANELS
SPECIALISTS IN DECORATIVE METAL

▲ For more details circle NED-1109 D3 on enclosed inquiry slip ▲

Free MANUAL for CARPENTERS & WOODWORKERS

48 Pages telling
HOW—WHEN—WHERE to use a Portable ROUTER

Send for your copy

Heard About Porter-Cable's Amazing New Router Chuck? It's the sensation of the tool industry! Works on an entirely new principle. Exclusive *Kamgrip Chuck* grips the bit tighter—keeps it aligned—prevents shank galling—assures accurate cuts!

Exclusive with Porter-Cable. Standard on Models 511 & 514—plus more powerful motors, oversized sealed bearings, Dial-O-Matic depth adjustment.

NEW LOW PRICES! Model 511, 22,000 rpm—$119.00 Model 514, 20,000 rpm—$199.00

PORTER-CABLE Machine Co.
1404 N. Salina St., Syracuse 8, N. Y.
Manufacturers of Quality Portable Electric Tools
In Canada write: Strongridge, Ltd., London, Ont.

▲ For more details circle NED-1110 D3 on enclosed inquiry slip ▲

SPEED LOAD HANDLING for Truck, Shop or Machine

UNIT *utility* HOIST

Hydraulically operated Unit Utility Hoists can speed and ease handling of 1000 to 2000 lb. loads around your trucks, shop or machines, and the hoist itself can be switched from the truck, floor or machine mount in seconds. Three lifting points and boom extension give a wide working range. Hoist swings 360° on truck and locks securely in traveling position. Many uses in every plant.

Write today for latest information

UNIT MFG CO. 1223 Harmon Place Minneapolis 3, Minnesota

▲ For more details circle NED-1111 D3 on enclosed inquiry slip ▲

New Literature & Catalogs

Adjustable Lighting Fixtures

Swivelier Co.—Over 300 universally adjustable lighting products are contained in illustrated 40-page bulletin 132. Products are arranged into sections covering canopy shade units, portable units, Vogue-Lites, recessed fixtures, wiring devices, units for outdoor use, special units and lighting accessories. Many suggested applications are shown, along with mounting instructions and detailed specifications.

▲ For more details circle NED-1112 D3 on enclosed inquiry slip ▲

"Production Through Research"

Rheem Mfg. Co., Aircraft Div.—Graphic picture of this company's policy regarding producibility and the manner in which it has geared its development and production program in this division is presented in the 16 illustrated pages of the brochure "Production Through Research." Research, development and production facilities are shown.

▲ For more details circle NED-1113 D3 on enclosed inquiry slip ▲

Arc Welding Applications

Hobart Brothers Co.—"Arc Welding and the Hundreds of Ways It Pays" is title of 40-page illustrated booklet EW173. More than 100 photos point out how arc welding is used profitably in 18 different industries for production, maintenance and repair. Included are descriptions of arc welders, electrodes and accessories and list of texts on welding.

▲ For more details circle NED-1114 D3 on enclosed inquiry slip ▲

Power Industrial Trucks

Elwell-Parker Electric Co.—Details of a complete line of platform and fork trucks and floor cranes are presented in 12-page illustrated manual. Features of these industrial power materials handling units are outlined, and accessories which add versatility to their application are shown.

▲ For more details circle NED-1115 D3 on enclosed inquiry slip ▲

Electric Component Cans & Covers

Heldor Mfg. Corp.—A complete line of standard and MIL-27 cans and covers for hermetically sealed transformers and other electrical and electronic equipment and components is described in 12-page illustrated catalog. Sizes and types are available for practically all applications. Also covered are brackets, channels and end bells.

▲ For more details circle NED-1116 D3 on enclosed inquiry slip ▲

Ball Screws, Worm Gears, Motors

Vard, Inc.—Purpose of this 12-page illustrated brochure is to acquaint the reader with the products and facilities of this producer of ball screw assemblies, actuator gears, hour glass worms, worm gears and fractional horsepower motors. Chart shows typical operating loads of standard ball screw units.

▲ For more details circle NED-1117 D3 on enclosed inquiry slip ▲

Metal Cleaning Processes

Whitfield Chemical Co.—Data on cleaning of metal surfaces and assemblies, preparation for painting and stripping organic finishes is found in 8-page illustrated folder. Various processes are described and correct chemical to be used is specified.

▲ For more details circle NED-1118 D3 on enclosed inquiry slip ▲

Small Lathes

South Bend Lathe Works—Outstanding features of Light Ten quick-change gear and toolroom model lathes are illustrated in 12-page catalog 5216. Both bench and floor types are covered and specifications, dimensions and attachments and accessories are described.

▲ For more details circle NED-1119 D3 on enclosed inquiry slip ▲

Hydraulic Pumps & Controls

Vickers Inc.—Descriptive and specification data on entire line of pumps, valves, cylinders, power units, transmissions and control devices for oil hydraulic operation of industrial machinery is found in illustrated catalog 5001 of 56 pages. Application data are also included.

▲ For more details circle NED-1120 D3 on enclosed inquiry slip ▲

Sprag-Type Clutches

Formsprag Co.—Line of over-running, indexing and backstopping clutches made with a full complement of "sprags" is described in 6-page illustrated folder. Application and engineering data are included for this type of clutch which has a high torque capacity for size and weight.

▲ For more details circle NED-1121 D3 on enclosed inquiry slip ▲

FAST MOVING LINE TO MORE PROFITS VIA "STREAMLINER" CONVEYORS

Yes . . . on the move to faster handling of goods, at a reduction in handling costs! If you've never visualized a "Streamliner" engineered conveyor in your plant, just take a moment to determine where you could use one. Shipping? Receiving? Production? Storage? No matter where, "Streamliner" Conveyors will save you time, money and man-effort. Get complete facts today by requesting Bulletin 302.

Ferguson designs and manufactures a variety of conveyors and conveyor systems to meet individual requirements.

HARRY J. FERGUSON COMPANY
133 WEST AVENUE, JENKINTOWN, PENNA.

▲ For more details circle NED-1122 D3 on enclosed inquiry slip ▲

PROCESS with STEAM?

DO IT CHEAPER FASTER—BETTER WITH A

cochrane C-B
CONDENSATE DRAINAGE CONTROL SYSTEM

Save Money. Fuel costs may be reduced 10% or more because condensate is returned to boiler with no temperature or pressure drop. Make-up water costs are sharply reduced because there is no water loss through flashing. Boiler room maintenance costs are cut because entrained air and corrosive gases are separated from returned condensate.

Speed Production. Faster, more efficient heat transfer is assured; cooking and curing cycles are speeded; cold-starts eliminated; production can be increased as much as 35% because "insulating" layers of condensate are removed from all types of steam processing equipment, continuously and efficiently.

Improve Quality. Product quality is improved because heat fluctuations are leveled out; hot- and cold-spots are eliminated; processing time is reduced.

Write Today and discover how a Cochrane C-B High Pressure Condensate Drainage Control System can help you when used with:

Platen Presses	Vulcanizers	Tumblers
Jacketed Kettles	Tube Dryers	Coil Cookers
Dry Cans	Ironers	Drum Dryers
Expellers	Dry Plates	Spray Dryers
Drying Rolls	Unit Heaters	Presses
Dryers	Jacketed Mixers	Digesters

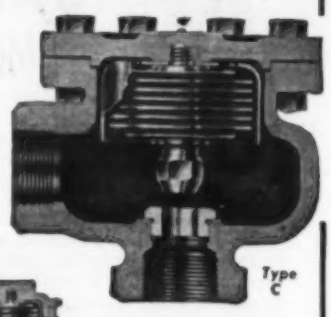
cochrane corporation
3143 N. 17th Street, Philadelphia 32, Pa.

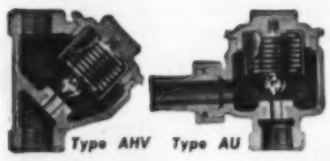
▲ For more details circle NED-1123 D3 on enclosed inquiry slip ▲

NICHOLSON TRAPS

STOP TEMPERATURE FLUCTUATION LOSS

The unusual effectiveness of Nicholson steam traps in discharging air as well as condensate was again proved recently by a large maker of molded products. Costly temperature fluctuation of the presses was eliminated by Nicholsons. Also widely used for such critical applications as jacketed kettles. 5 types; for process, heat, power; sizes ¼" to 2"; press. to 250 lbs.





BULLETIN 152
162 Oregon St.
Wilkes-Barre, Pa.

W. H. NICHOLSON & CO.
TRAPS · VALVES · FLOATS

▲ For more details circle NED-1124 D3 on enclosed inquiry slip ▲

Bright boy makes a better man...

Much better . . . in *time savings alone by as much as 50%*, combining, burring, cleaning, finishing, polishing into *one operation!*
And Brightboy gives *more* big 'plus' advantages: superb work quality, operation-saving versatility and adaptability far greater than conventional abrasives. With Brightboy you get the working advantages of *both* rubber and abrasive. Brightboy's extensive time-and-work-saving features are due to its unique *rubber-cushioned*, light-grind action.

TRY A TEST!

Ask your dealer for this sample card containing Brightboy blocks in 3 textures, and for the Brightboy Catalog-Manual. Write us if he cannot supply you—or on any problem where finishing is involved.

BRIGHTBOY FINISHES MANY MATERIALS
—*defense products and civilian goods in* ALL METALS • PLASTICS • WOOD • GLASS HARD RUBBER • PRESSED AND LAMINATED MATERIALS AND COMBINATIONS.

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Weldon Roberts Rubber Co.
6th Ave. & No. 13th Street Newark 7, N. J.
America's Pioneer Manufacturer of Rubber-Bonded Abrasives

WELDON ROBERTS
Brightboy
RUBBER CUSHIONED ABRASIVES

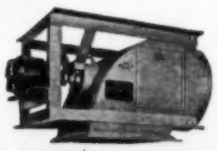
▲ For more details circle NED-1125 D3 on enclosed inquiry slip ▲

High Hats are out of date

now— it's the Homburg

High Chimneys, too, are out of date

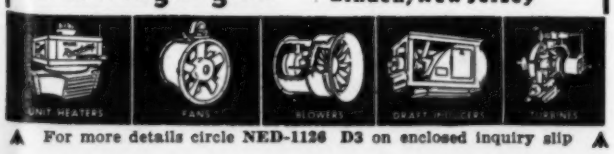
now— it's the WING DRAFT INDUCER



Why? Because your heating plant can have positive, adequate, uniform draft without the need for tall, unsightly, expensive stacks. Unlike variable chimney draft, the Wing Draft Inducer gives perfect motorized draft in any weather. It cuts fuel costs by giving higher CO_2's. Smoking is reduced or eliminated. The capacity of your boiler plant is increased.

Write for a copy of Bulletin I-52

L. J. Wing Mfg. Co. 165 Vreeland Mills Road Linden, New Jersey



▲ For more details circle NED-1126 D3 on enclosed inquiry slip ▲

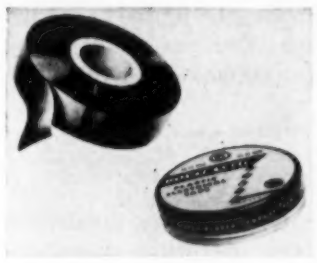
New Processes & Materials

PROCESS MOISTURE CONTROLLER adds moisture for calendering

Mounted on upper portion of paper calendering frames and driven by the top roll, this "in line" moisture applicator adds moisture to paper sheet about to be calendered. It is designed for production speeds of 1000 fpm and is capable of applying controlled moisture of between 9 and 11 per cent maximum, down to as low as 3 per cent minimum. It maintains moisture across a full 52-in. web with a variation of less than ½-per cent. Developed in collaboration with Waxide Paper Co. by **Black-Clawson Co.**, Dilts Machine Works Div., N. First St., Fulton, N. Y.

▲ For more details circle NED-1127 D3 on enclosed inquiry slip ▲

PLASTIC ELECTRICAL TAPE has 10,000-v dielectric strength



Marketed under the brand name of Royalistic, vinyl plastic electrical tape is 0.006-in. thick and has pressure-sensitive adhesive on one side. Tensile strength is 20 lb per inch of width. Other advantages include good abrasion resistance, adhesion at low temperatures and dielectric strength of 10,000 v. Tape is unaffected by sunlight and has no corrosive effect on electrical conductors. It also resists action of water, acids, alkalies, oil and aging. Tape is available in 66 or 30-ft rolls ¾-in. wide and 10-ft rolls ½-in. wide. Made by **United States Rubber Co.**, 1207 Rockefeller Center, New York 20, N. Y.

▲ For more details circle NED-1128 D3 on enclosed inquiry slip ▲

SKYLIGHT GLASS BLOCK inner screen increases insulation

Designed for use in skylights both structurally and optically, Skytrol glass block made in 4-in. thick 12 x 12-in. squares minimizes problems of condensation, glare and heat gain or loss. Fibrous glass screen sealed in the block creates a double cavity which increases block's insulating quality. The screen, in addition to block's internal prisms and Soft-Lite Edge, assure evenly diffused daylight from a panel of uniform illumination. Made by **Pittsburgh Corning Corp.**, Dept. 12-NED, 307 Fourth Ave., Pittsburgh 22, Pa.

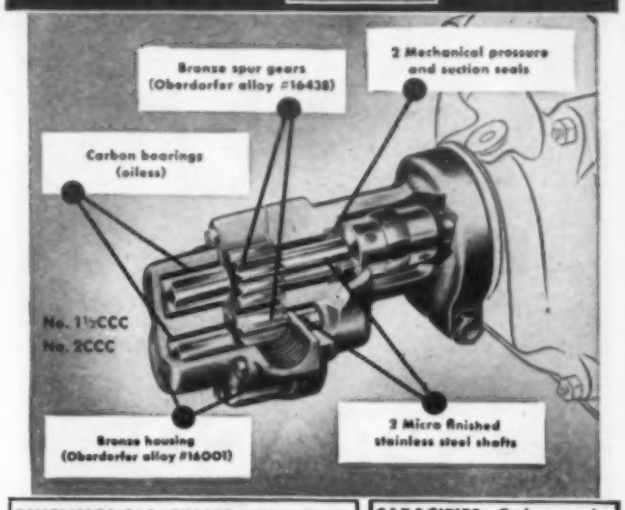
▲ For more details circle NED-1129 D3 on enclosed inquiry slip ▲

CABLE SPLICE OIL SEAL used with oil pressure is prevalent

Harvel Oil Stop used as an oil seal on cable splices where oil pressure is encountered, acts as a binder between layers of insulating tape to seal against pressure and moisture. Only one splice per conductor is required and cost of potheads is eliminated on low voltage terminals and indoor terminals. Seal remains oiltight indefinitely, because it cures without heat into an infusible state. It adheres to rubber, oil-impregnated paper, varnished cambric tape, fiber, bakelite and copper. Made by **Irvington Varnish & Insulator Co.**, Dept. NED, 6 Argyle Terrace, Irvington 11, N. J.

▲ For more details circle NED-1130 D3 on enclosed inquiry slip ▲

Two close coupled motor driven
OBERDORFER BRONZE PUMPS



DIMENSIONS & PRICES—Pump only

Pump No.	Ht.	Width	Lgth.	List Price
1½CCC	2⅞"	21 1/16"	4¾"	$20.00
2 CCC	3 11/16"	2⅜"	4⅞"	22.50

Complete units with ⅓ hp. 110 volt AC thermal overload motors (motor standard, but specially machined for pump mounting). Motor price $13.50 net.

CAPACITIES—Gal. per min. 1725 rpm—lbs/sq.in.

Press.	1½ CCC	2 CCC
0 lbs.	2.00 gal.	4.00 gal.
25 lbs.	1.83 gal.	3.67 gal.
50 lbs.	1.67 gal.	3.17 gal.
75 lbs.	1.58 gal.	2.83 gal.
100 lbs.	1.50 gal.	—

See our catalog in Sweet's PRODUCT DESIGN File

Oberdorfer Foundries, Inc., Ind. Pump Div.
234 Thompson Rd. Syracuse, N. Y.

▲ For more details circle NED-1131 D3 on enclosed inquiry slip ▲

new literature

DUST and FUME TOPICS

A quarterly review of the latest applications in dust control, "Dust and Fume Topics" describes a practical approach to a variety of dust control problems in each issue. Send in your name and you will receive a copy regularly.

DUST CONTROL *in the Metal Industry*

Bulletin 392 describes the use of Dustube Collectors for solving the heavy dust creating problems of the metal industry. It contains typical application examples. Send for your copy.

DUST CONTROL *in the Chemical Industry*

Case history reports on the handling of hexachloride, cryolite and sulphur dusts are presented in Bulletin 342. It shows how Dustube Collectors recover valuable material, improve working conditions and reduce maintenance costs.

33 EXAMPLES of DUST CONTROL

This 24-page brochure contains 33 examples of efficient removal of dust and fume from process operations. Ask for it by title, "Industry Relies on Dustube".

40-PAGE CATALOG

Catalog 72-B contains 40 pages of practical information and engineering data on dust and fume control. It explains the unique operating simplicity and economy of Dustube Collectors.

American dustube® COLLECTORS
WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St., Mishawaka, Ind.

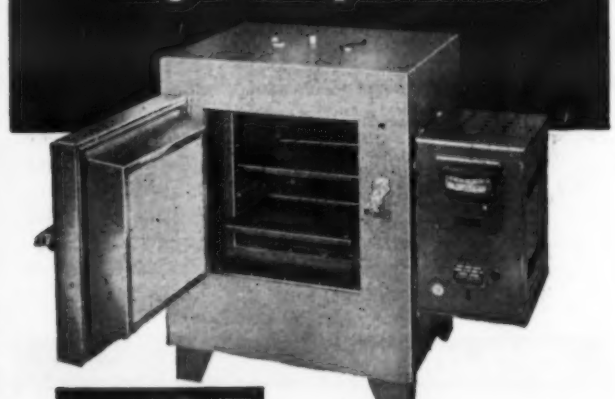
▲ For more details circle NED-1132 D3 on enclosed inquiry slip ▲

SPRACO NOZZLES

Write for NOZZLE CATALOG to
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-1133 D3 on enclosed inquiry slip

precise control of *high temperature*



BLUE M LINE *hi-heat*

ELECTRIC OVENS

Makes Teflon test procedures easy! For laboratory or pilot plant . . . drying, baking, tempering, etc.

Power Selector Switch . . . built in to provide selection of wattage input with relation to working temperatures. Reduces operating costs by proportioning current to temperature throughout the entire range.

Electronic Pyrometer . . . Series C equipped with indicating and controlling pyrometer and iron-constantan thermocouple. Series A and B have indicating and controlling hydraulic thermostat. U.L. approved. Power contactors are of solenoid type—inherently reliable.

Construction and Insulation. Double wall, heavy stainless steel interior, exterior and door. Dual Modella insulation with 5" to 7½" thick sections on all six sides. Stainless steel bellows seals mean lifetime door closure. Two stainless steel shelves—adjustable and removable. Modella heater bank widespread for uniform temperature. All wiring complete . . . meets N.E.C. standards.

12 MODELS TO CHOOSE FROM

3 temperature ranges in 4 sizes each

Series A—Temperatures from 150°F to 800°F
Series B—Temperatures from 150°F to 1000°F
Series C—Temperatures from 150°F to 1200°F

Inside dimensions: 12" x 12" x 12"; 16" x 16" x 14"
19" x 15" x 18"; 24" x 20" x 20"

All models available with Forced Draft Turbo-blower and ball bearing motor

See your local dealer or write for Bulletin

BLUE M ELECTRIC COMPANY
306-308 West 69th Street, Chicago, Illinois

For more details circle NED-1134 D3 on enclosed inquiry slip

New Literature & Catalogs

Industrial Power Distribution

General Electric Co.—The answers to most industrial power distribution problems are given in 28-page "Idea Book" No. GEA-5900. Discussed are such subjects as methods of buying electric power, what to do when a choice of primary voltages is available, types of load center distribution system, and application of controls. Use of feeder switches, starters and fuses; grounding of systems; combined power and lighting; how to apply capacitors; methods of obtaining economical direct current and other information are covered.

For more details circle NED-1135 D3 on enclosed inquiry slip

Process Pumps

De Laval Steam Turbine Co.—Capacities ranging from 15 to 2000 gpm at heads of 15 to 200 feet are available in 1 to 6-in. type CP and CPO centrifugal process pumps described in illustrated bulletin 1125-A.

For more details circle NED-1136 D3 on enclosed inquiry slip

Recording Controller

Foxboro Co.—Developed to control temperature, pressure, liquid level, humidity and other process variables automatically, the restyled Circular Case controller is discussed in 16-page illustrated bulletin 465. This instrument is applicable in food, textile, metal and ceramic industries. Four classes of measuring systems available for automatic temperature control are analyzed.

For more details circle NED-1137 D3 on enclosed inquiry slip

Flexible Gear Couplings

Sier-Bath Gear & Pump Co.—16-page illustrated catalog C4 shows design and operating characteristics of the new line of flexible gear couplings. They are available with bores up to 6 in., will handle speeds to 25,000 rpm in the smallest size and transmit up to 600 hp per 100 rpm. Compactness, ease of assembly and disassembly without special tools, and safe operation are features.

For more details circle NED-1138 D3 on enclosed inquiry slip

Alloy Tubing & Specialties

J. Bishop & Co. Platinum Works—Cold drawn mechanical, capillary, hypodermic and other stainless steel tubing from 0.001 to 1-in. OD; nickel and nickel alloy tubing; small tubular specialties are covered in 12-page illustrated bulletin. Included are such data as comparative analysis of alloy types, specifications, standard tolerances tables, physical properties and relative workability.

For more details circle NED-1139 D3 on enclosed inquiry slip

Rotary Seals

Durametallic Corp.—12-page illustrated bulletin "Dura Seal" lists various types and styles of mechanical seals that are designed to rotate with the shaft in such equipment as rotary and centrifugal pumps, autoclaves, agitators and blowers. Seals are available in wide range of materials to suit practically any service.

For more details circle NED-1140 D3 on enclosed inquiry slip

Industrial Tape & Dispensers

Minnesota Mining & Mfg. Co.—"Use America's Most Complete Line of Taping Machines and Dispensers" covers equipment available for applying more than 200 different Scotch brand pressure-sensitive tapes. This 8-page illustrated booklet describes hand, stationary, portable, heavy duty and desk dispensers; definite length dispensers; apron tapers; standard job applicators and custom-built models.

For more details circle NED-1141 D3 on enclosed inquiry slip

Grinders & Pulverizers

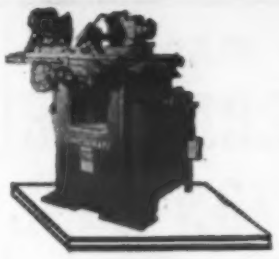
Hardinge Co.—Two illustrated bulletins deal with tube mills and grinding mills. Applications, specifications and operation of tube mills for grinding and pulverizing are covered in 12-page illustrated catalog 18-B. Catalog AH-440 contains 6 pages of data on line of grinding mills.

For more details circle NED-1142 D3 on enclosed inquiry slip

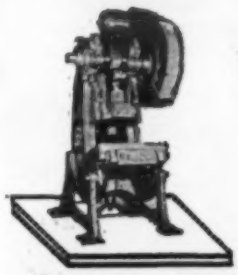
Stainless Fabrications

Rodney Hunt Machine Co.—Range of engineered stainless steel fabrications is shown in illustrated bulletin 153 of 4 pages. Emphasis is placed on standard and special stainless tanks in a variety of sizes. Company is equipped to make equipment from the small to very complex.

For more details circle NED-1143 D3 on enclosed inquiry slip



For Longer Machine Life Use UNISORB® Mountings



Eliminate 60%-85% of transmitted machine vibration, reduce machine maintenance and eliminate floor drilling — by mounting your machines on UNISORB.

No bolts, no lag screws when you use UNISORB pads with our special cement. Or, you can use UNISORB pads precoated with adhesive when mounting machines that do not require shimming.

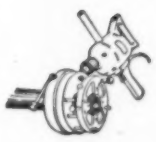
"Why It Pays To Anchor Your Machines With UNISORB" tells the entire story about this modern way to reduce noise and vibration. Ask for your copy. No obligation.

the FELTERS company
224 South Street
Boston 11, Massachusetts

WRITE FOR YOUR COPY OF THIS INTERESTING BOOK

For more details circle NED-1144 D3 on enclosed inquiry slip

ARMSTRONG BROS.
Better PIPE TOOLS



An easier, faster, better way to thread 1" to 2" pipe . . .

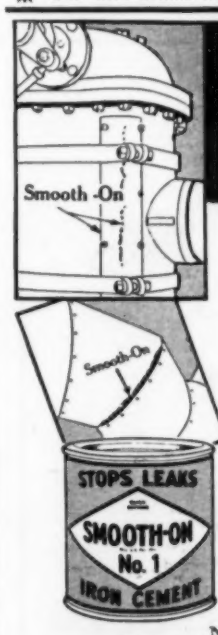
WITH POWER!

This light (26 lb.) compact Portable Power Pipe Threader, goes to the job—is operated with a ½" portable electric drill. 1 set of High Speed Steel Chasers do all sizes—just move indicator to 1", 1¼", 1½" or 2" marking. Clamp on pipe and apply drill to drive square. The rest is automatic. Operating on anti-friction bearings with automatic lead, it's a fast, easy way to get smooth, accurate threads.

Write for Catalog

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVENUE • CHICAGO 30, ILL.

For more details circle NED-1145 D3 on enclosed inquiry slip



Repairs both Cast and Sheet Metal

The quick-hardening, fast-clinging, temperature-resistant properties of Smooth-On No. 1 Iron Cement make it just right for countless repairs in industrial plants, shops, homes. It seals cracked castings, stops leaks in breeching, tightens loose rivets, bolts, screws and machine parts. Does not require use of heat or "gadgets". Any handy man can use it successfully. Buy Smooth-On No. 1 in 1- 5- or 20-lb size and keep it handy. If your supply house hasn't Smooth-On, write us.

FREE Famous Repair Handbook

Now in its 28th edition, this 40-page, fully illustrated, pocket-size manual shows many short-cut, time-saving, money-saving repairs to machinery, equipment, pipe lines, etc. Drop us a line for YOUR free copy.

SMOOTH-ON MFG. CO., Dept. 10
570 Communipaw Ave., Jersey City 4, N. J.
SO-292

Do it with SMOOTH-ON
THE IRON REPAIR CEMENT OF MANY USES

For more details circle NED-1146 D3 on enclosed inquiry slip

The New CLEARVIEW
NAMEPLATE PRESS
EASY TO OPERATE • COMPACT • DURABLE

Here at last is a new low-priced Nameplate Press that will pay for itself quickly and many times over.

Now you can stamp neat, perfectly aligned letters and figures on all types of identification plates with this new, easy-to-operate Nameplate Press:
MACHINERY DETAIL PLATES
KEYS — TAGS — CHECKS
IDENTIFICATION PANELS and scores of other identification purposes.

ELIMINATES OBSOLETE STAMPING BY HAND

- Stamps Neat Uniform Characters
- Fully Automatic Letter Spacing
- High Quality Hardened Steel Dial
- Interchangeable Dial Adjustment
- Accommodates Plates up to 4" x 8"
- Prevents Irregular Alignment—Spacing—Depth

FULLY GUARANTEED

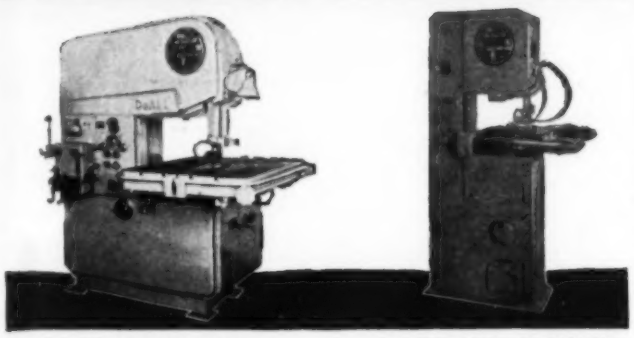
Write, call or wire today for complete information and price.

PERMANENT IDENTIFICATION—It is often hard to keep tab on various pieces of equipment because of inadequate or temporary methods of identification marking. A solution to this dilemma may be the metal stamping machine illustrated.

The CLEARVIEW Company
149 E. Houston St. New York, N. Y.

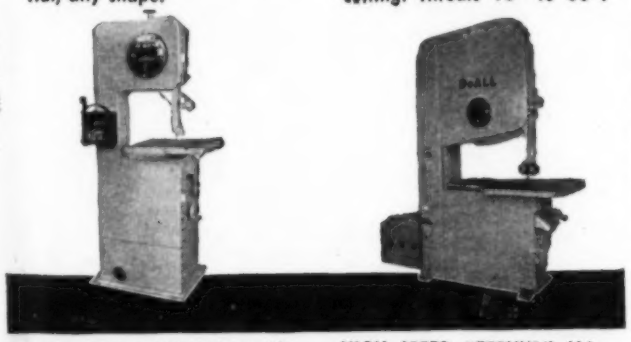
▲ For more details circle NED-1147 D3 on enclosed inquiry slip ▲

There is a DoALL BAND MACHINE to suit every purpose . . . every pocketbook



THE "CONTOUR-MATIC"—The features and capabilities of all other models plus hydraulic controls, wider speed range, more power, greater tool variety. Cuts any material, any shape.

"ML" CONTOUR MACHINES—Five models—Precision machines for general purpose band sawing, filing, polishing. 50 to 1500 F.P.M. variable speed for conventional metal cutting. Throats 16" to 60".



"UTILITY" BAND SAWING AND FILING MACHINES—Four models—16" throat. Two speed range 50 to 350 F.P.M. and 860 to 5200 F.P.M. Also available fixed speed. For small shops and experimental or model work in large shops.

HIGH SPEED "ZEPHYR" MACHINES—High speed 500 to 15000 F.P.M., fixed or variable. 16" to 60" throats. For high speed sawing of nonferrous metals and non-metallics, friction cutting ferrous sheet, plate up to 1".

EVERY SHOP can have the benefits of DoALL band machining, the fast, economical process that "slices" material apart instead of reducing it to pile of chips. There is a DoALL Band Machine and Band Tool for precision cutting every material, every shape—sawing, line grinding, polishing, honing, friction sawing, cutting. For production, maintenance, toolmaking—a DoALL will save manhours, material and money, free other machines for work to which they are better suited. Call your local DoALL Sales-Service Store for a free demonstration. Ask for literature.

THE DoALL COMPANY, 254 N. Laurel Ave., Des Plaines, Ill.
B-3½

INDUSTRY'S NEW TOOLS — DoALL — 38 SALES-SERVICE STORES

▲ For more details circle NED-1148 D3 on enclosed inquiry slip ▲

New Processes & Materials

INSULATION MATERIAL for temperatures up to 900° F

Developed for use in air conditioning plenum chambers, Firefoil insulation material is suitable for temperatures up to 900° F. It possesses water resistance, but is not suitable for outdoor exposure. Material is made of fine corrugated asbestos felts, bonded and treated to form a light weight, strong and rigid material that can be nailed, screwed or bolted in place and cut with ordinary carpenter's tools. Other uses include machinery housings, partitions, ship bulkheads, coil housings, ovens and fireproof elevator shaft linings. Made by **Philip Carey Mfg. Co.**, Dept. FF, Cincinnati 15, O.

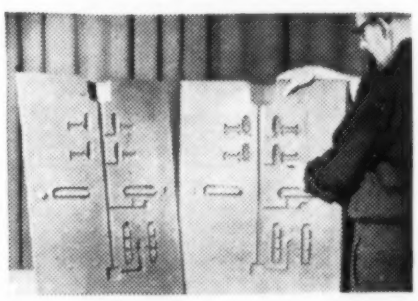
▲ For more details circle NED-1149 D3 on enclosed inquiry slip ▲

METAL CUTTING AGENT soluble in both water and oil

Soluble in both water and oil, Metalloid WOS metal cutting agent for machining and grinding operations is an odorless, nontoxic, sulphur-free solublized organic condensate containing chlorine, nitrogen, oxygen and carbon. Material is nonstaining except on some copper and brass alloys which discolor slightly if product remains on work over 12 hours. Agent functions on Dynatomic heat-limiting principle. It is reported to release free atoms at point of cut which unite with active metal to cause embrittlement and reduce plastic flow of metal during cutting. Tool and work remain cool, internal stress and distortion are minimized and surface finish quality is improved. Tool and wheel life are greatly increased. Formulated by **Metalloid Corp.**, Huntington 1, Ind.

▲ For more details circle NED-1150 D3 on enclosed inquiry slip ▲

SYNTHETIC FOUNDRY MATERIALS for shell molding and sand casting



All synthetic materials required for shell molding process and sand casting are included in this "foundry package." It contains two materials essential to shell molding, S-1054 phenolic resin binder and SM-55 silicone parting agent to release shell molds from their metal patterns. G-E 12353 liquid phenolic core binder enables sand cores to be baked in shorter time at lower temperature than with other binders. Fourth product in the "package" is G-E 3255 Permafil, a low viscosity pressure impregnating fluid for sealing porous castings against air and liquid leaks. Made by **General Electric Co.**, Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

▲ For more details circle NED-1151 D3 on enclosed inquiry slip ▲

CORROSION RESISTANT COATINGS based on neoprene formulations

Savings of up to 50 per cent per square foot are reported in maintenance painting and coating cost when neoprene-base corrosion resistant paints and cements are used. Line consists of NeoCoat and NeoPrime A for all surfaces except concrete, and NeoPrime B for concrete surfaces.

NeoCoat is a true plastic and involves use of an accelerator which is premixed. Polymerization takes place after finish is applied. Both primer and coatings are formulated to attain proper protective thickness within three coats. It will effectively cover welds, beads, seams and edges. Coatings will withstand practically all corrosive atmospheres and materials including various strengths of hydrofluoric and sulphuric acids, persulphates, ammonia, peroxides and other chemicals. Developed by **Pennsylvania Salt Mfg. Co.**, 932 Widener Bldg., Philadelphia 7, Pa.

▲ For more details circle NED-1152 D3 on enclosed inquiry slip ▲

BEVERLY THROATLESS SHEARS

MAKE CUTS LIKE THESE QUICKLY... EASILY... ACCURATELY

18 ga. metal cut with Model B-1 Shear.

Save time, labor and material—use a Beverly to make any cut . . . straight, curved or irregular in any metal. Exclusive design allows work to be turned at any angle while cutting. Standard in the industry for years. 4 models—capacities to ⅛" mild.

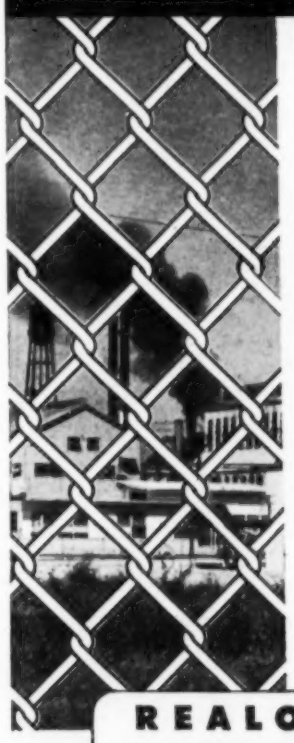
See your Beverly Distributor for a demonstration. Write for FREE illustrated circular on Beverly metal cutting Shears.

MODEL B-3 with ball bearing hold down. Cap. ⅜" mild; 10 gauge stainless.

Beverly SHEAR MFG. CO.
3016 W. 111th STREET • CHICAGO 42, ILLINOIS

▲ For more details circle NED-1153 D3 on enclosed inquiry slip ▲

REALOCK FENCE



GIVES *Positive* PROTECTION

Positive protection for your grounds and property is assured with Realock Fence. In addition, all fittings, hinges and locking devices have bolts on the inside, secure from outside tampering.

Noted for its rugged construction and long-lasting weather resistance, Realock Fence can be depended upon for years of dependable, trouble-free service.

For additional information write our nearest sales office or consult your classified telephone directory.

THE COLORADO FUEL & IRON CORPORATION
Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION
Oakland, California
WICKWIRE SPENCER STEEL DIVISION
Buffalo, New York

REALOCK FENCE
THE COLORADO FUEL & IRON CORPORATION CF&I
BRANCHES IN ALL KEY CITIES

▲ For more details circle NED-1154 D3 on enclosed inquiry slip ▲

THROW THEM AWAY ... and Save Money

Regrinding of carbide tools—even the best—consumes time and money. It can be a major item in over-all tooling costs. But—there's a way to eliminate this expense entirely on many jobs. Here's how.

The "Kendex" tool needs no regrinding! It has an indexable insert that can be discarded when all its multiple cutting edges become dull.

By the time replacement is required (at slight cost compared to that of regrinds), the insert has already paid for itself by increased productivity, and to discard it is economical practice.

Kendex tools are available in three styles—with round, square, or triangular inserts—as illustrated, and in a range of shank sizes—½" to 1" square.

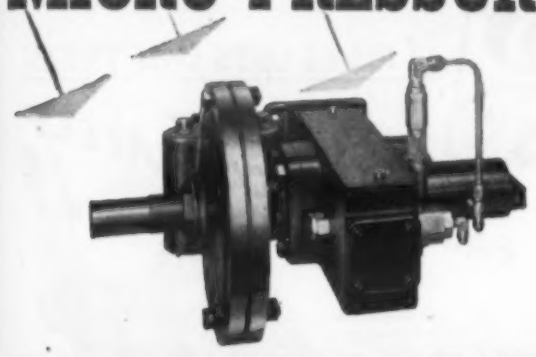
Perhaps you have jobs on which standard Kendex tools will be suitable—or you may be able to use the standard inserts in conjunction with present tooling. If you desire, one of our Tool Engineers will be glad to assist in working out suitable applications of the "Kendex"* principle to your specific machining problems. Kennametal Inc., Latrobe, Pa.

*KENDEX

KENNAMETAL
CEMENTED CARBIDE TOOLING THAT INCREASES PRODUCTIVITY

▲ For more details circle NED-1155 D3 on enclosed inquiry slip ▲

Measure & Transmit MICRO-PRESSURES



the ASKANIA PNEUMATIC TRANSLATOR

For the transmission of low static or differential pressures . . in the range of 0–1.0 w.c. or higher. For automatic control or recording of pressure, flow, or liquid level.

It measures low-level signals and transmits an air signal or output pressure at a higher level . . usually standard instrument range of 3–15 p.s.i.

Accurate to ±0.5%. Diaphragm measurement of static or differential pressures eliminates trouble associated with mercury manometers.

For additional details, ask for bulletin 154.

ASKANIA REGULATOR COMPANY
258 E. Ontario Street Chicago 10, Illinois
Subsidiary of General Precision Equipment Corp.

▲ For more details circle NED-1156 D3 on enclosed inquiry slip ▲

100 MARKS IN A MINUTE OF MARKING TIME

Marking production will rise with the use of Matthews "AIRGRIT" Marking Machine . . . it takes about a half-second to complete the normal marking cycle with this amazing unit. "AIRGRIT" produces a permanent mark on plastic, glass, cutlery, machined parts . . . parts with delicate or precision finishes which conventional marking methods would mar or distort. "AIRGRIT" . . . the compact, safe, easy-to-operate, revolutionary marking unit for producing permanent, distortion-free, economical marks.

Write Matthews today for literature and information, and a sample of "AIRGRIT" marking.

JAS. H. MATTHEWS & CO.
3962 FORBES ST. • PITTSBURGH 13, PA.
CLIFTON, N. J. BOSTON PHILADELPHIA CHICAGO

▲ For more details circle NED-1157 D3 on enclosed inquiry slip ▲

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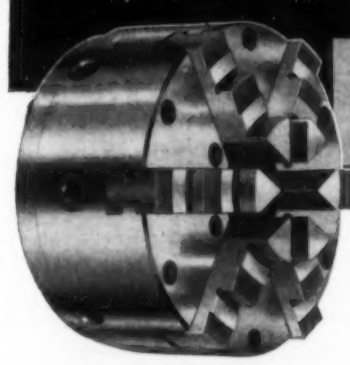

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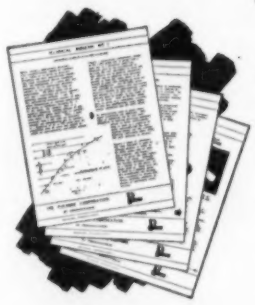

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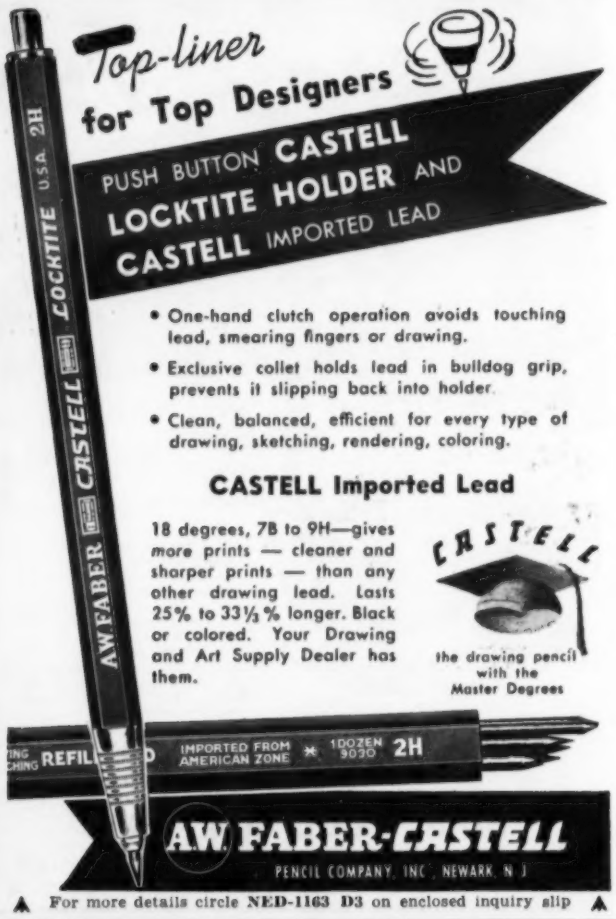

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New Literature & Catalogs

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Hohl Machine & Conveyor Co.—Hydraulically elevated or lowered to meet floor level of truck or box car, the Hohl adjustable ramp for loading docks and shipping platforms is described in 4-page illustrated folder. It can be used in existing docks or installed in special pits in new buildings.

▲ For more details circle NED-1165 D3 on enclosed inquiry slip ▲

Centrifugal Pumps

De Laval Steam Turbine Co.—4-page illustrated bulletin 1002 deals with single stage, single and double suction centrifugal pumps which have respective capacities of 50 to 600 gpm at heads to 275 ft and 175 to 6000 gpm at heads up to 300 ft.

▲ For more details circle NED-1166 D3 on enclosed inquiry slip ▲

Magnetic Motor Starters

Arrow-Hart & Hegeman Electric Co.—Type RA-V magnetic motor starters, designed especially for use in Crouse-Hinds explosionproof condulets and available in NEMA sizes 0 through 5 are detailed in 8-page illustrated bulletin 4529. These controls are especially applicable in petroleum, chemical, petrochemical and related industries as well as wherever the combination of explosive atmosphere plus adverse climatic conditions is critical.

▲ For more details circle NED-1167 D3 on enclosed inquiry slip ▲

Clay Products

American Vitrified Products Co.—96-page illustrated guide book L-5652 includes data on sewer pipe and fittings, perforated pipe, channel pipe, wall coping, flue linings, chimney tops and pots, stove pipe, liner plates, fire brick, fire clay, septic tanks, drain tile, joint compound and die cast sewer covers. Also listed are ASTM and Federal specifications as well as installation and purchasing hints.

▲ For more details circle NED-1168 D3 on enclosed inquiry slip ▲

Ductile Drawing Brass

American Brass Co.—Said to be stronger, harder and springier than the usual drawing brasses, Formbrite is described in 12-page illustrated publication B-39 as retaining ductility for forming and drawing. It takes sharp, clean-cut, ornamental die impressions. Bulletin lists physical properties and has data on pressroom and finishing room procedures. Case histories are also presented.

▲ For more details circle NED-1169 D3 on enclosed inquiry slip ▲

Screw Conveyors & Feeders

Link-Belt Co.—Comprehensive is the word for 92-page book 2289 on screw conveyors and feeders. Units described and illustrated are capable of handling a wide variety of materials from light to heavy, coarse to fine, sluggish to free-flowing. Engineering information, selection tables, horsepower formulas, layouts, dimensional data and installation photos are included.

▲ For more details circle NED-1170 D3 on enclosed inquiry slip ▲

Free-Machining Steel

La Salle Steel Co.—Properties and application of La-Led free-machining lead-bearing steel bars are discussed in 8-page bulletin No. 8. Machinability, surface quality, bending and crimping qualities, machined tolerances and other properties are detailed and case histories are given.

▲ For more details circle NED-1171 D3 on enclosed inquiry slip ▲

Engineering Progress with Wood

Timber Engineering Co.—"One Hundred Years of Engineering Progress with Wood" is title of 110-page illustrated book that covers development of woodworking machinery, materials for wood-cutting tools and other subjects. Six discussions and 21 papers by leading engineers and wood technologists are included in this comprehensive publication.

▲ For more details circle NED-1172 D3 on enclosed inquiry slip ▲

Torque Converter

General Motors Corp., Detroit Diesel Engine Div.—The inside story of the G-M torque converter is related with cutaway drawings, curves showing horsepower characteristics of engine so equipped and pictures of torque converter units at work in 8-page illustrated booklet 6SA24. Operating principles of unit which provides smooth power flow and protection from damage caused by sudden load changes are explained.

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B-916

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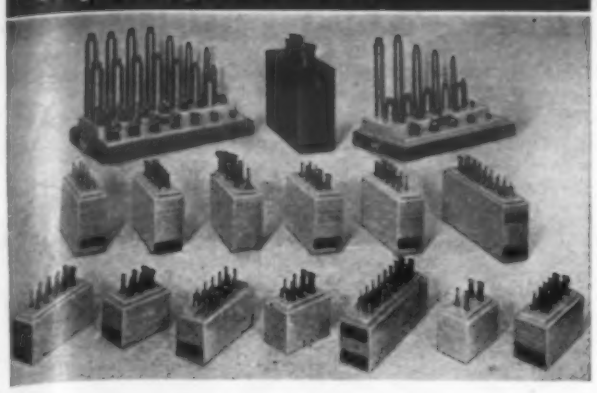

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TABLE MODEL featuring automatic material-holder.

Ideal for cutting paper, plastics, rubber, fabrics and other light materials

Now, at low cost, you can increase cutting efficiency and production. Jacques, Jr. all-metal cutters are designed for cutting jobs which do not require large heavy-duty cutters — yet *do* require more ruggedness, speed, and accuracy than are found in ordinary light paper cutters.

Jacques, Jr. construction features add speed and efficiency to your cutting operations. Exclusive automatic material-holder (self-adjusting clamp) automatically comes down, as blade is lowered, to hold material to be cut. Adjustable gauge and steel rule (on table-model) assure accurate cuts. Other features include high grade steel blades, spring tension cutting, and safety spring on blade handle (to prevent accidental cutting). Sturdy, all-metal construction stands up under continuous use.

BENCH MODEL

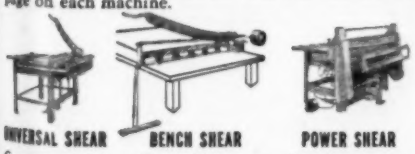
Attaches to your own bench. Cuts materials from continuous rolls or long strips. Perfect for many in-line production operations.

AVAILABLE IN TWO MODEL TYPES
Table model comes in 12", 16", 20", 24" and 30" sizes. Bench model (for your own bench) available in 24", 30" and 36" sizes.

Investigate the advantages of Jacques, Jr. cutters now! Write for descriptive circular giving complete information!

There's a Jacques shear or cutter for your every cutting need!

Let us know your cutting requirements and problems. We'll recommend the shear best suited for your use. Write for descriptive catalog page on each machine.



UNIVERSAL SHEAR — Cuts material quickly into clean, uniform strips—1/8" to 20" in width. (Six sizes available)

BENCH SHEAR — Cuts widths up to 10 ft. on your own bench. Extremely versatile! (Twelve sizes available)

POWER SHEAR — For intermittent or continuous cutting, up to 70 strokes per min. Adaptable for *any* production set-up.

OTHER SHEARS
• J-L Shear (lighter, less expensive adaptation of Universal Shear)
• Card Cutter (small, compact cutter)
• Bookbinder's Shear (for specific applications)

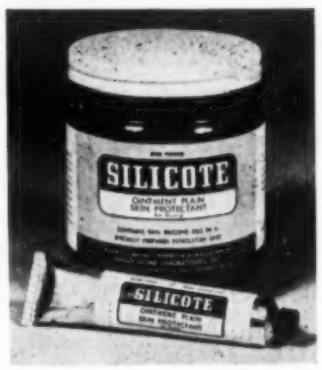
For faster, cleaner cutting through the years, specify only genuine Hobbs replacement blades, accessories, and repair parts.

HOBBS MANUFACTURING CO.
41 SALISBURY ST., WORCESTER 5, MASS.
Producers of Modern Machinery for Modern Industry
Jacques Hand and Power Shears, Slitters and Rewinders, Hobbs Autotronic and Tri-Power Die Presses, Paper Box Machinery and Touch-O-Matic Industrial Cutters.

For more details circle NED-1178 D3 on enclosed inquiry slip

New Processes & Materials

SILICONE HAND OINTMENT repels water and moisture



Rough, chapped, irritated skin, resulting from frequent exposure to water and other substances can be effectively prevented by Silicote ointment. Incorporating silicones, ointment repels water and moisture in a manner which, at the same time, allows normal skin respiration. It can be used to prevent irritation, or to promote healing. Silicones not only repel moisture, but are inert, adhesive, nontoxic and nonsensitizing. Ointment is available in 1-oz tubes and 1-lb jars. Formulated by **Arnar-Stone Laboratories, Inc.**, 1316-D Sherman Ave., Evanston, Ill.

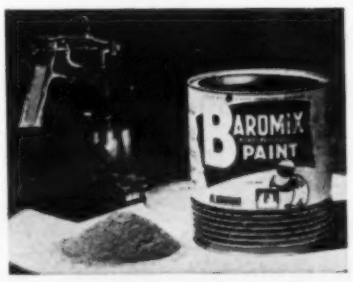
For more details circle NED-1179 D3 on enclosed inquiry slip

EMULSION TYPE ADHESIVE joins Pliofilm to other materials

Designed expressly for joining Pliofilm to porous surfaces such as kraft, glassine and other papers and boards, adhesive B55 is heavy-bodied emulsion type. It is also suitable for laminating the above materials, and for making lined bags and boxes. Fast initial tack conforms to normal machine speeds. Made by **Federal Adhesives Corp.**, 212 Wythe Ave., Brooklyn 11, N. Y.

For more details circle NED-1180 D3 on enclosed inquiry slip

PROTECTIVE PAINT dry powder is mixed with kerosene



Adaptable for protecting structures subjected to chemical fumes, smoke, weather and other destructive elements, Baromix is a powdered asphalt paint that is readily mixed with kerosene to any desired consistency. Applicable by brush or spray gun, it affords permanent bond to metal, wood, concrete or composition surfaces. It will not flow on vertical surfaces with temperatures up to 325° F. Dry powder stores indefinitely without deterioration. Containers for making 1 and 5 gallons are offered. Made by **Berry Asphalt Co.**, Asphalt Specialties Div., P. O. Box 540, Magnolia, Ark.

For more details circle NED-1181 D3 on enclosed inquiry slip

ALL THESE Johnson Sleeve Bearings FROM STOCK

YOUR local Johnson Distributor is prepared to furnish any of these bearings and bearing metals. He stocks a complete line . . . and is supplemented by a huge Johnson warehouse stock to aid in prompt delivery. Write for the new Johnson Bearing Catalog.

JOHNSON BRONZE CO.
580 S. Mill St., New Castle, Pa.

JOHNSON JB BEARINGS Sleeve Type

For more details circle NED-1183 D3 on enclosed inquiry slip

SHUT OUT NOISE

WITH THIS UNIQUE, NEW TELEPHONE ATTACHMENT

made of the finest plastic; rugged and durable; nothing to wear out or get out of order. Simply snap it on to ANY TYPE of telephone instantly!

Keeps out noise. | Two or more people can listen. | Improves hearing.

ELIMINATES BACKGROUND NOISES OF:
• MACHINERY
• CONVERSATION
• OFFICE MACHINES

All normal business and industrial equipment and functions can continue without stoppage!

List Price $3.75 COMPLETELY GUARANTEED
Special consideration on quantity orders

AMPLIFIES HEARING

WRITE OR TELEPHONE
BELVISION
254 GREENWICH STREET
NEW YORK CITY 7, N. Y.
Dept. W. BArclay 7-6063

For more details circle NED-1184 D3 on enclosed inquiry slip

PREVENT ACCIDENTS

DUE TO PUNCTURES

WITH STEARNS

ROAD MAGNETS

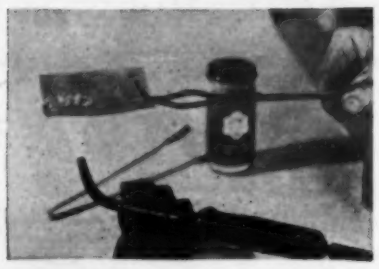
Motorists have fewer punctures, fewer accidents . . . when a Stearns Road Magnet is on the job removing tramp iron from roads, streets and parking lots. As much as 25 pounds of scrap iron has been picked up on a twenty five mile run. Consult Stearns, largest exclusive builder of magnetic equipment. 1005

STEARNS MAGNETS

STEARNS MAGNETIC, INCORPORATED
653 South 28th Street Milwaukee 46, Wis.

For more details circle NED-1185 D3 on enclosed inquiry slip

ALL METAL LIQUID SOLDERING FLUX



New liquid aluminum soldering flux makes possible sweating on aluminum, stainless steel, monel, copper, brass, steel or any combinations of same. The newly developed liquid chemical actually breaks the surface oxide on all types of aluminum so that a sweat job is possible in the same manner as ordinary flux on the common metals. Called Liquid ASMC Flux it makes possible the soldering together of such dissimilar metals as stainless steel to aluminum or any combinations of the above metals to aluminum or each other. When used in combination with Farrelloy All Metal Solder the Flux eliminates the electrolytic action between dissimilar metals so that a permanent bond, highly resistant to corrosion is obtained. ASMC Flux makes possible the use of induction heat as well as torch or iron. Production jobs using induction heat are now being accomplished putting two brass studs on Aluminum Name Plates at the rate of 250 per hour. Same flux when used with Farrelloy Solder is equally effective on filling in blow holes in aluminum castings, sweating name plates on cast iron, and many other jobs. ASMC Flux is priced at $3.50 per pound, fob Philadelphia. Farrelloy Solder $2.00 per pound, fob Philadelphia (14 bars to the pound). Write **Farrelloy Company, Dept. NED.** 1246 North 26th St., Philadelphia 21, Pa. *Advt.*

For more details circle NED-1186 D3 on enclosed inquiry slip

NoDrip ...STOPS CONDENSATION DRIP!

NoDRIP PREVENTS RUST in addition to stopping drip and keeping floors dry.

ANYONE CAN APPLY

Brush, trowel or spray NoDrip on tanks, condensers, suction lines, vats, pipes, walls, ceilings, etc. NoDrip adheres to metal, concrete, brick, plaster. It forms a seamless covering that is effective as soon as dry. Acid, alkali and brine resistant.

Interesting 32-page Handbook shows what NoDrip is and what it does. It's free. Send coupon today.

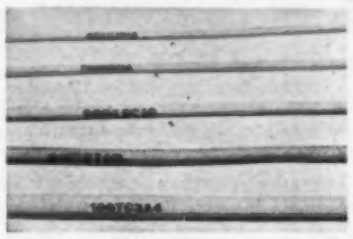
☐ SEND NoDRIP HANDBOOK
NAME .....
COMPANY .....
ADDRESS .....
CITY ..... STATE .....

J. W. MORTELL CO., 526 BURCH ST., KANKAKEE, ILLINOIS

For more details circle NED-1187 D3 on enclosed inquiry slip

New Processes & Materials

MARKED INSULATED WIRE
machine applies any required code



Originally designed for their own use, insulated wire marking machine is now available for custom-marking or hot-embossing any size wire from Nos. 20 to 4 with either black or white plastic letters. Marking is performed on wire 1-in. from each end, with additional markings at intervals of 2 to 12 in., as desired, along the wire. Wire can be cut to any desired length from 2 in. to 12 ft. Any number of characters and spaces up to 15 can be used to code larger wires. Marking service offered by **RAM Meter, Inc.,** 1102 Hilton Rd., Ferndale 20, Mich.

For more details circle NED-1188 D3 on enclosed inquiry slip

GASKET MATERIAL
combines asbestos and neoprene

The compressibility of du Pont neoprene rubber and the heat resistance of asbestos are combined in Asbestoprene gasket material developed for applications customarily using glue-glycerin treated paper. Product also features high dimensional stability, does not cause corrosion of light metals and is resistant to oils, water, gasoline and antifreeze solutions. Tensile strength is 1500 psi minimum in machine direction, and 500 psi in cross-machine direction. Mullen burst strength is 130 lb per 1/16-in. gage; compressibility, 20-30 per cent at loading of 1000 psi; and recovery, 40 per cent minimum. A 1/16-in. sheet can be bent around 1/32-in. mandrel without cracking. Developed by **Victor Manufacturing & Gasket Co.,** 5750 Roosevelt Rd., Chicago, Ill.

For more details circle NED-1189 D3 on enclosed inquiry slip

THERMAL INSULATING BLOCK
suited for up to 1900° F service

Capable of withstanding temperatures up to 1900° F, Supertemp P.V. insulating blocks are designed for ease of handling, lightness in weight and fast application. Combination of vacuum and pressure techniques are used to felt and compress the mineral wool fibers to assure strength and uniform insulating properties. Made by **Eagle-Picher Co.,** Dept. NED, 900 American Bldg., Cincinnati 1, O.

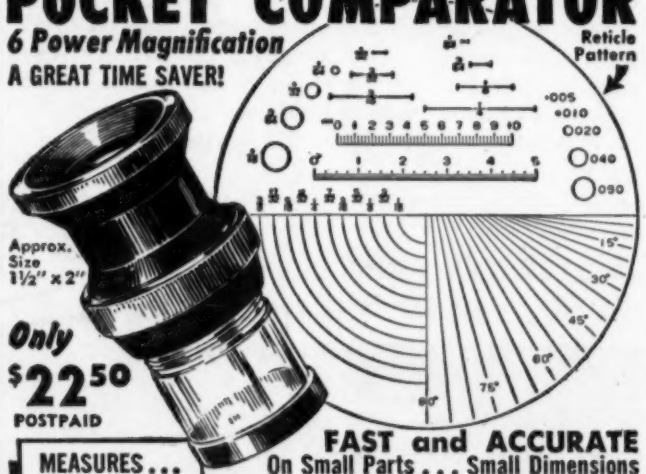
For more details circle NED-1190 D3 on enclosed inquiry slip

CHECK, MEASURE, INSPECT with this HANDY

POCKET COMPARATOR

6 Power Magnification

A GREAT TIME SAVER!



Only $22.50 POSTPAID

MEASURES...
✓ ANGLES
✓ RADII
✓ CIRCLES
✓ LINEAR DIMENSIONS in both decimal inches and millimeters

FAST and ACCURATE
On Small Parts . . . Small Dimensions

First time available at such low price! EDSCORP POCKET COMPARATOR. Fine, imported measuring magnifier — for fast, accurate inspection of intricate parts without expensive equipment. Used to check layouts, machining on tools, dies, gauges — to check threads, chamfers, small holes. In optical work for checking flaws such as bubbles, seeds, scratches, pits and digs. For scientists — in determining width of spectrograph lines. This instrument comes in protective leather case. We guarantee complete satisfaction or your money back.

WE'LL SHIP ON 10-DAY TRIAL OFFER *Attach Coupon to Company Letterhead*

EDMUND SCIENTIFIC CORP., Barrington, New Jersey
Please ship EDSCORP Pocket Comparator Stock No. 30,061-AE on 10-day Trial Offer
☐ Check is enclosed in amount $22.50. ☐ Bill on open account.
Name .....
Company .....
Address .....
City ..... Zone ..... State .....

For more details circle NED-1191 D3 on enclosed inquiry slip

BLACK & DECKER POWER TRIO SPEEDS PRODUCTION

TOWSON, MD.—Powered by B&D-built universal motors, these production triplets of the Black & Decker Mfg. Co. are engineered to turn out more work at lower cost with fewer rejects. They're all perfectly balanced *with pistol grip and trigger* switch for easier handling, less worker fatigue. For demonstration, see any B&D distributor. For free literature, write: THE BLACK & DECKER MFG. CO., 609 Pennsylvania Ave., Towson 4, Md.

¼" HOLGUN $44.00 — Now 25% more powerful; can't be stalled at rated capacity.

¼" TAPGUN* $105.00 — Threads holes in metal 8 times faster than by hand.

#12 SCRUGUN* $59.50 — Now 50% more powerful for increased capacity.

*Trade Mark Reg. U.S. Pat. Off.

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC TOOLS

For more details circle NED-1192 D3 on enclosed inquiry slip

CONVEYING . . 90° power roller curve
for handling around curves

A new type, 90° Power Roller Curve Conveyor—which overcomes all past difficulties in conveying boxes, cartons and packages around curves—has recently been perfected by The Alvey-Ferguson Co.

overcomes all past difficulties

The basic differences in the design of this conveyor are: the use of tapered rollers which provide efficient package control with no skewing or jamming action—and a simple V-belt drive which assures quiet, smooth operation with extremely low maintenance cost. This V-belt drive requires no oiling and it can be removed without the use of special tools and without dismantling the conveyor.

Power for driving the V-belt is provided from an individual motor or from an adjacent conveyor. This new Tapered Roller Curve Conveyor is so constructed as to be combined easily with other A-F Conveyor Sections.

For latest information on modern, efficient handling methods for all types of products and materials, write **The Alvey-Ferguson Co.,** 31 Disney St., Cincinnati 9, Ohio. *Advt.*

For more details circle NED-1193 D3 on enclosed inquiry slip

INSTANT FLOOR PATCH

REPAIRS BROKEN CONCRETE IN A HURRY!

TEST ON TRIAL OFFER

Patch broken concrete floors without tying up plant traffic. Use durable INSTANT-USE—a tough plastic material which takes traffic immediately. Ideal for repairing cracks, holes, ruts. Bonds tight to old concrete—. . . right up to a feather edge.

JUST TAMP! TRUCK OVER!

Simply shovel INSTANT-USE into hole or rut—tamp—and your floor is restored to solid smoothness—ready for traffic. Used indoors or out. Immediate shipment.

MAIL COUPON FOR TRIAL OFFER

INSTANT-USE

FLEXROCK COMPANY Offices in principal cities
3603 Filbert St., Philadelphia 4, Pa.

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and HAND BOOK OF BUILDING MAINTENANCE —no obligation. (Clip and attach Coupon to Co. letterhead).

Name ..... Title .....
Company .....
Address .....

For more details circle NED-1194 D3 on enclosed inquiry slip